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NEW ENGLAND SURGICAL SOCIETY

CANCER OF THE PROSTATE WITHOUT URINARY SYMPTOMS*

BY J. DELLINGER BARNEY, M.D.†

THE object of this paper is to call attention once more to several points having to do not only with the vagaries of cancer of the prostate but with its diagnosis.

I wish first to reiterate what many writers have already stated about the frequency of this disease. It may be found in from 15 to 25% of all cases of prostatic obstruction. In nearly 700 cases of this condition reviewed by the writer, together with Gilbert, and reported before this society in 1923 it was found that cancer existed in over 23%. In other words one man in every four or five who presents himself with prostatic symptoms may justly be suspected of having malignant disease. Observations continued since this time have shown about the same high percentage. In view of this experience it seems most important to call attention to it on every possible occasion. Furthermore, it should be said that the diagnosis in these cases was not by any means made in every instance by rectal examination alone. In the well-developed case, cancer of the prostate can be readily diagnosed by those with even moderate experience. On the other hand, there are many other cases in which the most expert urologist can say only that the prostate is "suspicious" or "borderline", leaving his final decision to the findings revealed at operation or by microscopic examination of the specimen. In addition to cases of this nature there are a few others in which no suspicions of malignant disease will exist in the surgeon's mind and wherein the diagnosis is made only by the pathologist who, in making serial sections of the entire gland chances upon a carcinomatous area. Finally, there is a certain number of cases in which cancer exists, as shown by subsequent events, but in which the area of malignancy is so small and so circumscribed as to escape the notice of both the surgeon and the pathologist. The corollary to these remarks is first, that a rectal examination should always be made in every male patient who has either reached or passed middle life. This applies no matter what the symptom for which the patient presents himself, as will be shown later. Secondly, the surgeon should always keep in mind the possibility of malignant disease even though rectal examination shows nothing of a suspicious nature. Thirdly, it is obvious that every specimen should not only be submitted to a pathologist, but also the latter should make serial sections of the entire organ.

The title of this paper, "Cancer of the Prostate Without Urinary Symptoms" was selected because the condition is often encountered and yet is not widely recognized.

Bumpus in 1922, reviewing a large series of cases of prostatic cancer at the Mayo Clinic says, ". . . Carcinoma of the prostate often becomes very extensive and even metastasizes before urinary symptoms call attention to its presence."

The same writer in a review of 1000 cases of malignant disease of the prostate, in 1926, states that although frequency and difficulty of urination were given as the initial symptoms in 650 cases, retention, a common first symptom in benign hypertrophy, occurred but 37 times. Bumpus found no cases in which gross hematuria was noted as an initial symptom and this we know is not uncommon in cases of simple adenoma. That the urine in malignant disease of the prostate is either normal or but slightly clouded by infection and may continue in this condition was observed not only by Bumpus, but also by Gilbert and the present writer. Bumpus' observations are further cited by Young who quotes him as saying that in 362 cases of cancer of the prostate there were no symptoms at all in 3%, the diagnosis having been made in the course of a routine physical examination, while in 0.5% the patient consulted a physician only because of edema of the leg.

In regard to the latter symptom Young states that it is usually a late manifestation of the disease but he has seen patients with no dysuria, frequency or pain but with marked swelling of the leg and thigh on one side.

Bergmark has reported a case of osteocarcinomatosis arising from prostatic cancer which was kept under observation for nearly a year.

*Read at a Clinic for the New England Surgical Society at the Massachusetts General Hospital on September 27, 1930.

†Barney—Chief of Service, Urological Department, Massachusetts General Hospital. For record and address of author see "This Week's Issue", page 998.

During this time and until the patient died there was no functional bladder disturbance nor any subjective bladder symptoms.

Bonnamour and Giraud report a case of metastatic carcinoma of the liver in an 80 year old man. They emphasize particularly the fact that metastases can occur most insidiously without any functional disturbances of the urinary apparatus.

In our paper of 7 years ago Gilbert and I said that "cancer of the prostate often becomes very extensive and even metastasizes before urinary symptoms call attention to its presence".

In Bumpus' series of 1000 cases, metastases were demonstrable in 243 (24.3%) at the time of examination. This figure is unquestionably too low, for Bumpus himself and others also have reported a much higher percentage in other groups of cases. Not only this, but also it is well known that metastases may and often do exist without being demonstrable by the methods of examination now at hand.

The fact that cancer of the prostate invades the lymphatic system extensively and at an early date is not so well appreciated as it should be. This is perhaps due to the fact that the lymphatic drainage from the malignant prostate affects nodes which are deep-seated, and therefore not palpable unless they attain considerable size. When the invasion has proceeded far enough the glands of the neck become involved and being more or less superficial are generally palpable. The inguinal glands being superficial are also detected by palpation but in Bumpus' experience these glands were noted in but 18%; those of the neck were detected in but 11%.

It is obvious from what has been said that while cancer of the prostate may exist rarely with no symptoms whatever, it not uncommonly will give rise to symptoms, either objective or subjective, localized to other parts of the body than the urinary tract itself. A recognition of this fact may sometimes lead to the solution of what might otherwise be an obscure problem.

To illustrate this, let me cite briefly a few cases. Some years ago I saw a man of 57 who for two and a half months had suffered from pain below the left costal margin together with severe gastric pain after meals. These symptoms were due to metastases from a cancerous prostate. There were no urinary symptoms whatever. Another case was a man of 47 who had had painful defecation for five months, pain in the buttocks for two months, and nocturia with more or less urinary incontinence for only five weeks.

Two cases which illustrate admirably the point of this communication were seen by the writer, one in 1926, the other in 1927.

The first was a man of 62, referred by Dr. Hardy Phippen of Salem because of edema of the left thigh and leg. There were no urinary symptoms whatever at any time during the course of the disease. The urine remained negative to the end and on several occasions I found only about half an ounce of residual urine. Dr. Phippen had found an unduly large and firm prostate when he first saw the case and suspected cancer. My examination confirmed his findings and his suspicions. There was marked edema of the entire leg from groin to ankle and yet in spite of all this the patient was active not only in business but also played handball regularly twice a week. During the few months from the time he was first seen by Dr. Phippen until his death the patient slowly but steadily lost weight and strength. Toward the last he developed a cough with dyspnoea. An x-ray of the chest showed fluid on the left side, undoubtedly due to metastases; the pelvis and spine also showed extensive invasion. It is interesting to note that I sent this man to Dr. Benjamin S. Barringer of New York, in the hope that some temporary relief might be given and with the idea of encouraging the patient. Under Dr. Barringer's skilful use of radium the edema of the leg entirely disappeared for several weeks. It eventually recurred, however, and the patient succumbed very rapidly.

The second case was a man of 62, referred by Dr. Fred Winslow of Boston in November, 1927. During the previous six months the patient had complained of lumbar pain and pain in the right leg and thigh with hyperesthesia of the thigh. At the onset some edema of the thigh was noted but this eventually disappeared. There had been no urinary symptoms whatever and the urine was persistently normal. These conditions obtained until the man's death some months later. The residual urine was never tested. For a time the patient gained weight, due perhaps to the fact that a well known orthopedic surgeon had been treating the patient for "arthritis" of the spine. This treatment consisted not only of advice to have certain infected teeth extracted, but also of colonic irrigations, massage, hydrotherapy and general hygiene. In his careful, routine examination of the patient, Dr. Winslow noted a certain amount of enlargement, together with induration and nodularity of the right lobe of the prostate. He felt that this was evidence of malignant disease. My examination of the patient confirmed this view. The right leg and thigh were distinctly atrophic and also hyperesthetic, so much so that the bed clothes had to be supported on a cradle. As time went on weakness of the right leg appeared, to be followed later by paralysis. This and other symptoms suggested the possibility of a cord tumor. Accordingly the patient was seen by Dr. James B. Ayer. After a most thorough neurological examination, which included several lumbar punctures, lipiodol injection of the spinal canal and x-rays, a diagnosis was made of intraspinal tumor of the cord, probably metastatic from the prostate. No other metastases were demonstrable. The patient failed rapidly and died in January, 1928. An autopsy by Dr. Tracy Mallory showed cancer of the prostate, together with a metastatic tumor of the cord at its junction with the cauda equina. The tumor rested on the right antero-lateral wall between the first and second lumbar vertebra and involved the anterior nerve roots. The prostate was normal in size. The left lobe was normal; the right lobe and the right seminal vesicle were replaced by carcinoma. The retroperitoneal lymphatic glands on the right side as high as the renal artery were cancerous.

This case illustrates beautifully the point I wish to emphasize in this paper. It is not the only case that has come to my attention where, owing to inadequate physical examination the symptoms have been treated instead of

the disease. The fact that the disease itself cannot be treated successfully is of no consequence. I feel that one should at least make a correct diagnosis, especially when this may often be done by a simple rectal examination.

In closing my remarks I can only repeat what I have already said in other words, namely, that cancer of the prostate is far more common than we have realized; that for some time it may give rise to few or no symptoms; that its symptoms may involve not only at first, but throughout the course of the disease, organs and tissues entirely removed from those of the urinary system. Let us not be led to believe that malignant disease of the prostate has but one set of symptoms. Also, if there is any virtue in operating upon such cases early, and there is reason to believe that there is, too much stress cannot be laid upon the value of regular, frequent and complete physical examination which should include, of course, careful palpation of the prostate.

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THE LOSS OF TIME BEFORE A TUBERCULOUS PATIENT IS ADMITTED TO A SANATORIUM

BY LINSLY R. WILLIAMS, M.D.,* AND ALICE M. HILL, A.B.*

TREATMENT in a sanatorium is generally held to offer the optimum for the patient suffering from tuberculosis. Yet few patients enter upon this treatment until after the disease has made considerable progress. With a view to learning more about the factors responsible for the delay in bringing tuberculous persons under proper care, the National Tuberculosis Association undertook a study of what happens to patients prior to their admission to a sanatorium[1]. The special histories upon which this study is based offer considerable data regarding the time it took 1,499 patients to be admitted to such an institution.

The question as to how much time passes before a patient is admitted to a sanatorium embraces a number of others: What period elapses between the appearance of the first symptom and admission? What, between the first consultation and admission? Between the diagnosis and admission? Between the recommendation of sanatorium treatment to the patient and the filing of the application? Between the application and admission? For many steps must be taken before a tuberculous individual is placed under institutional care.

THE TIME ELAPSING BETWEEN THE APPEARANCE OF THE FIRST SYMPTOM AND ADMISSION TO THE SANATORIUM

By the time twelve months and a few days had elapsed after the appearance of the first symptom of tuberculosis, just half of the patients of this study had been placed under sanatorium treatment. The proportion of admissions within a year, 49 per cent., was the same among both men and women. Four hundred and eleven, 27.4 per cent., were admitted within six months, and six others before any symptom was evident. (See TABLE I.)

It is of interest to know that of those cases admitted within six months, 14.6 per cent. were in the minimal stage, 51 per cent. in the moderately advanced, and 34.5 per cent. in the far advanced. That such a high percentage of those admitted within six months after the first appearance of a symptom were moderately and far advanced cases of phthisis emphasizes the figures, present in an earlier report in this series, relative to the per cent. distribution according to the time elapsing between the appearance of the first symptom and the diagnosis of pulmonary tuberculosis of patients in each stage of the disease on admission. Both confirm the opinion "that there is a vast amount of concealed tuberculosis which frequently does not become evident until there has been considerable involvement of the lung".

THE TIME ELAPSING BETWEEN THE FIRST CONSULTATION WITH A PHYSICIAN AND ADMISSION TO A SANATORIUM

In an earlier article dealing with this study, it was stated that 24 per cent. of all the 1,499 patients permitted a year or more to elapse after the appearance of the first symptom before they consulted a physician. This being the case, the fact that 49 per cent. of the patients were admitted within a year after noticing the first symptom means that to the patients themselves may be attributed a considerable portion of the delay. But the physician also has a rôle in the situation. After his first consultation with a physician, how much time is consumed before the patient enters a sanatorium?

So far as the patients under consideration are concerned, something less than six months from the first consultation brought half of them into the sanatorium. (See TABLE II.) Within six months, 815, or 54.4 per cent., were admitted. Another 17.7 per cent. were admitted from six to eleven months after the first consultation, making a total of 72 per cent. within a year.

Of those patients who entered a sanatorium within three months after first asking a physician's advice, only 13.2 per cent. were in the minimal stage when admitted; 47.2 were in the

*Williams—President of New York Tuberculosis and Health Association. Hill—Statistical Field Service, National Tuberculosis Association. For records and addresses of authors see "This Week's Issue", page 998.

TABLE I

THE TIME ELAPSING BETWEEN THE APPEARANCE OF THE FIRST SYMPTOM OF TUBERCULOSIS AND ADMISSION TO THE SANATORIUM BY THE STAGE OF THE DISEASE AT ADMISSION AND THE SEX OF THE PATIENT

		Male				Female				
Length of time	Total	Total	Minimal	Moderately Advanced	Far Advanced	Total	Minimal	Moderately Advanced	Far Advanced	Unrecorded
Total	1499	762	89	313	360	737	92	327	317	1
Before symptom	6	2	2	—	—	4	2	—	2	—
Less than one month	29	15	3	9	3	14	1	8	5	—
One month and less than two	66	40	8	20	12	26	5	13	8	—
Two months and less than three	78	36	1	20	15	42	9	22	11	—
Three months and less than six	238	131	19	60	52	107	14	57	36	—
Six months and less than nine	210	99	9	42	48	111	9	55	47	—
Nine months and less than twelve	115	52	6	18	28	63	6	15	42	—
One year and less than two	236	108	11	48	49	128	16	51	60	1
Two years and less than three	118	61	8	12	41	57	12	19	26	—
Three years and less than four	75	28	1	15	12	47	6	21	20	—
Four years and less than five	41	21	3	8	10	20	2	8	10	—
Five years and less than ten	150	82	10	28	44	68	5	33	30	—
Ten years and less than twenty	66	43	3	20	20	23	1	11	11	—
Twenty years and over	21	16	2	4	10	5	—	4	1	—
Unknown months	3	3	1	1	1	—	—	—	—	—
Unknown years	35	18	2	6	10	17	2	7	8	—
Unknown	12	7	—	2	5	5	2	3	—	—

TABLE II

THE TIME ELAPSING BETWEEN THE FIRST CONSULTATION OF A PHYSICIAN AND ADMISSION TO A SANATORIUM BY THE STAGE OF THE DISEASE AT ADMISSION AND THE SEX OF THE PATIENT

		Male				Female				
Length of time	Total	Total	Minimal	Moderately Advanced	Far Advanced	Total	Minimal	Moderately Advanced	Far Advanced	Unrecorded
Total	1499	762	89	313	360	737	92	327	317	1
Before symptom	1	—	—	—	—	1	—	—	1	—
Less than one month	177	93	10	47	36	84	13	48	23	—
One month and less than two	190	110	20	46	44	80	13	35	32	—
Two months and less than three	139	69	4	34	31	70	7	29	34	—
Three months and less than six	309	158	20	74	64	151	26	66	59	—
Six months and less than nine	176	80	8	27	45	96	9	41	46	—
Nine months and less than twelve	89	37	4	16	17	52	4	23	24	1
One year and less than two	153	72	11	23	38	81	10	34	37	—
Two years and less than three	92	41	5	10	26	51	7	17	27	—
Three years and less than four	45	27	2	12	13	18	—	10	8	—
Four years and less than five	24	11	1	4	6	13	1	5	7	—
Five years and less than ten	65	38	2	12	24	27	2	12	13	—
Ten years and less than twenty	23	17	1	5	11	6	—	2	4	—
Twenty years and over	9	7	1	2	4	2	—	2	—	—
Unknown years	2	—	—	—	—	2	—	2	—	—
Unknown	5	2	—	1	1	3	—	1	2	—

moderately advanced stage, and 39.5 in the far advanced.

THE TIME ELAPSING BETWEEN THE PHYSICIAN'S DIAGNOSIS OF TUBERCULOSIS AND THE PATIENT'S LEARNING OF IT

The date on which the patient thought the first diagnosis of tuberculosis was made was not always the same in this group of patients as that on which he was first informed that he was tuberculous. The number of patients who thought the physician had informed them the very day he made the diagnosis of pulmonary tuberculosis was 879, or 59 per cent. of the group. An additional 425, or 28 per cent., were told within a month. On the other hand, 33 patients—11 men and 22 women—stated that they were sure a diagnosis of tuberculosis had been made a year or more before they had been so informed. According to their own statements, this delay in many instances affected adversely the patient's chances for recovery, for in the absence of information that they actually had tuberculosis they were not impressed with the

need for taking the necessary special care of themselves.

THE TIME ELAPSING BETWEEN DIAGNOSIS AND ADMISSION TO THE SANATORIUM

So far as these 1,499 patients are concerned, much the greater portion of the time elapsing between the appearance of the first symptom and the patient's arrival in a sanatorium came before the diagnosis of pulmonary tuberculosis was made. Half of them had entered a sanatorium before, or within a little over two months after, such a diagnosis. Three-fourths of the group were admitted within six months. (See TABLE III.) For some reason, or reasons, the men gained admission more promptly than the women. Fifty-five per cent. of the men were in a sanatorium within two months after the diagnosis was made, but only 42 per cent. of the women; 80 per cent. of the men, but only 71 per cent. of the women were in by six months afterwards.

TABLE III

THE TIME ELAPSING BETWEEN THE DIAGNOSIS OF PULMONARY TUBERCULOSIS BY A PHYSICIAN AND ADMISSION TO THE SANATORIUM, BY THE SEX OF THE PATIENT

Length of time	Total	Male	Female
Total	1499	762	737
Before diagnosis	37	19	18
Less than one month	410	243	167
One month and less than two	288	160	128
Two months and less than three	147	67	80
Three months and less than six	250	117	133
Six months and less than nine	101	42	59
Nine months and less than twelve	48	17	31
One year and over	199	90	109
Unknown months	2	1	1
Unknown years	1	—	1
Unknown	16	6	10

THE TIME ELAPSING BETWEEN THE DIAGNOSIS OF PULMONARY TUBERCULOSIS AND THE RECOMMENDATION OF SANATORIUM TREATMENT

Of course the speed with which a patient obtains admission to a sanatorium after the physician has diagnosed his case as one of pulmonary tuberculosis depends somewhat upon how soon he is advised to seek such treatment, whether by a physician or by someone else. The great majority of these 1,499 patients were so advised with promptitude. Forty-two of them, 21 men and 21 women, were told they should enter a sanatorium before a physician had definitely diagnosed the case as one of tuberculosis; and 1,023 others, 68 per cent., were told either on the same day or within a month after they thought a physician first made the diagnosis, that they would be more apt to improve if placed upon the regular sanatorium regimen. (See TABLE IV.)

TABLE IV

THE TIME ELAPSING BETWEEN THE DIAGNOSIS OF PULMONARY TUBERCULOSIS AND THE RECOMMENDATION OF SANATORIUM TREATMENT, BY THE SEX OF THE PATIENT

Length of time	Total	Male	Female
Total	1499	762	737
Before diagnosis	42	21	21
Less than one month	1023	551	472
One month and less than two	115	52	63
Two months and less than three	46	20	26
Three months and less than six	59	22	37
Six months and less than nine	40	17	23
Nine months and less than twelve	19	13	6
One year and over	111	51	60
Unspecified or unknown	22	9	13
Inapplicable—entrance due to patient's initiative	22	6	16

The difference in the promptness with which men and women entered a sanatorium after a diagnosis had once been made, as noted in the section just preceding, is partly accounted for here. Seventy-two per cent. of the men had sanatorium treatment recommended to them within a month after the diagnosis, but only 64 per cent. of the women.

Of all those who were not advised to enter a sanatorium for a year or more after the diagnosis had been made, and, in the case of the women, of those who did not have such treatment recommended to them but who made the arrangements to enter upon their own initiative, the great majority were in the far advanced stage when admitted.

WHO FIRST RECOMMENDED SANATORIUM TREATMENT TO THE PATIENT; AND WHO FIRST TOLD THE PATIENT THAT THE LATTER HAD TUBERCULOSIS

Any discussion of the time consumed between the diagnosis of pulmonary tuberculosis and the first recommendation of sanatorium treatment to the patient leads naturally to the question as to who first recommended such treatment.

The figures for these 1,499 patients are most interesting. In 1,063 cases the advice that the patient enter a sanatorium originated with the consultant who first told the patient that the latter's illness was tuberculosis. (See TABLE V.) In 118 others the suggestion first came from a physician consulted previous to the one who informed the patient that he had tuberculosis. In over half of these 118 (62), it came from general practitioners, many of whom probably were themselves certain of the diagnosis and advised what they deemed the best procedure for the patient, though hesitating to inform the latter of the exact nature of his illness. In 31 of them the suggestion came from general clinics, more particularly from one clinic maintained by an employer, the physicians of this clinic undoubtedly conceiving that information as to the diagnosis as well as treat-

TABLE V

THE TYPE OF PERSON WHO FIRST ADVISED SANATORIUM TREATMENT AND HIS RELATION TO THE CONSULTANT FROM WHOM THE PATIENT LEARNED THAT HE HAD PULMONARY TUBERCULOSIS

Type of person who first advised sanatorium treatment	Total	Not consulted	Told patient latter had tuberculosis: Total	First	Second	Third	Fourth	Fifth or over	Unknown	Before one who told patient latter had tuberculosis: Total	First	Second	Third	Fourth	Fifth or over	Unknown
Total	1499	98	1063	530	343	125	38	20	7	118	61	39	12	4	1	1
Patient	37	37	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other lay person	61	61	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General practitioner	778	—	650	396	177	53	17	7	—	62	39	16	5	2	—	—
Tuberculosis specialist	220	—	129	39	54	26	6	3	1	11	3	5	3	—	—	—
Tuberculosis clinic	216	—	154	46	62	31	9	5	1	6	1	3	1	—	1	—
General clinic	94	—	59	23	23	7	1	4	1	31	17	12	1	1	—	—
Hospital	31	—	25	11	9	2	1	—	2	1	—	—	1	—	—	—
Sanatorium	5*	—	5*	4	—	—	1	—	—	—	—	—	—	—	—	—
Other specified consultant	30	—	20	4	9	4	2	—	1	5	1	2	1	—	—	1
Unspecified kind of private physician	24	—	20	7	9	2	1	1	—	1	—	—	—	1	—	—
Unspecified consultant	2	—	1	—	—	—	—	—	1	1	—	1	—	—	—	—
Unknown	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Type of person who first advised sanatorium treatment	First after consultant who told patient: Total	First†	Second	Third	Fourth	Fifth or over	Unknown	Second or later after consultant who told patient: Total	Third	Fourth	Fifth or over	Unknown: Total	First	Unknown	Unknown
Total	172	3	108	38	13	9	1	43	14	13	16	4	1	3	1
Patient	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other lay person	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General practitioner	53	1	39	9	3	—	1	10	4	4	2	3	1	2	—
Tuberculosis specialist	63	—	37	14	5	7	—	17	6	5	6	—	—	—	—
Tuberculosis clinic	44	1	28	10	3	2	—	12	3	3	6	—	—	—	—
General clinic	3	—	2	1	—	—	—	1	1	—	—	—	—	—	—
Hospital	3	1	1	1	—	—	—	2	—	1	1	—	—	—	—
Sanatorium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other specified consultant	5	—	1	2	2	—	—	—	—	—	—	—	—	—	—
Unspecified kind of private physician	1	—	—	1	—	—	—	1	—	—	1	1	—	1	—
Unspecified consultant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unknown	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1

*Includes one patient already in institution under treatment for an ailment other than tuberculosis.
†In these three instances the first physician continued in charge of the case, the second having been called upon for consultation only.

TABLE VI

THE KIND OF PHYSICIAN WHO FIRST TOLD THE PATIENT THE LATTER HAD TUBERCULOSIS

the three instances the first physician continued in charge of the case, the second having been called upon for consultation only.

TABLE VI

THE KIND OF PHYSICIAN WHO FIRST TOLD THE PATIENT THE LATTER HAD TUBERCULOSIS WITH THE NUMBER AND KIND PREVIOUSLY CONSULTED

Kind of physician who first told patient latter had tuberculosis	Total	Previous consultants: General practitioners only: None	One	Two	Three	Four	Five	Tuberculosis specialist only: One	Two	Tuberculosis clinic only: One	General clinic only: One	General hospital only: One	Sanatorium: One	Other specified: One	Unspecified physician: One	Unspecified consultant: One or more
Total	1499	702	404	134	34	9	3	14	1	5	18	2	—	13	5	28
General practitioner	907	546	212	63	15	4	1	9	—	3	3	2	—	8	2	5
Tuberculosis specialist	148	45	61	18	4	2	—	1						3		
Tuberculosis clinic	164	47	61	23	7	2	1	—	1	1	3	—	—	1	—	1
General clinic	70	25	26	7	—	—	1	2	—	—	1	—	—	1	—	2
General hospital	35	13	12	3	1	—	—	—	—	—	—	—	—	—	—	2
Sanatorium	106	5	21	11	3	1	—	2	—	1	11	—	—	—	—	4
Other specified physician	30	9	8	6	4	—	—	—	—	—	—	—	—	—	1	—
Unspecified kind of private physician	27	10	3	—	—	—	—	—	—	—	—	—	—	—	2	—
Unspecified consultant	8	2	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Says never told	4	—	—	3	—	—	—	—	—	—	—	—	—	—	—	5

Kind of physician who first told patient latter had tuberculosis	Total	Previous consultants: One or more general practitioners and: One tuberculosis specialist	One tuberculosis clinic	One or more general clinics	One hospital	One sanatorium	One or more other specified physicians	One unspecified physician	One or more unspecified consultants	One tb. specialist or clinic and one or more other consultants	No tb. specialist or clinic but two or more other consultants	One tuberculosis clinic and one general clinic	Other combinations including with unspecified	Unknown if no previous consultant or if one general practitioner
Total	1499	18	12	31	6	1	34	1	2	9*	7†	1	4	1
General practitioner	907	3	1	4	4	1	16	—	—	1	2	—	1	1
Tuberculosis specialist	148	4	2	—	—	—	7	—	1	—	—	—	—	—
Tuberculosis clinic	164	1	1	4	1	—	6	—	—	1	2	—	—	—
General clinic	70	—	—	1	—	—	—	—	1	1	1	1	—	—
General hospital	35	—	—	1	1	—	—	—	—	1	1	—	—	—
Sanatorium	106	8	7	21	—	—	4	1	—	5	—	—	1	—
Other specified physician	30	1	—	—	—	—	1	—	—	—	—	—	—	—
Unspecified kind of private physician	27	1	—	—	—	—	—	—	—	—	1	—	1	—
Unspecified consultant	8	—	—	—	—	—	—	—	—	—	—	—	1	—
Says never told	4	—	1	—	—	—	—	—	—	—	—	—	—	—

*Includes one, one tuberculosis specialist and one tuberculosis clinic.
†Includes one, two other specified and one unspecified consultant.

ment might best be given by the sanatorium which it was expected the employee would enter shortly. But in 215 instances the advice came from a consultant seen subsequent to the one who told the patient that the latter had tuberculosis,—in 172 from one immediately following and in 43 from one even further removed, i.e., from the second to the twelfth after the one who informed the patient. In 98 instances the suggestion that the patient enter a sanatorium was first presented by a layman, or by the patient himself.

From a study of the data it appears that the consultant most hesitant to suggest sanatorium treatment is the general practitioner. To 778, or 52 per cent., of the patients the counsel to enter the sanatorium first came from a general practitioner—to 650 from the one who told the patient that the latter was tuberculous; to 63 from some subsequent one. With this it must be taken into account that in 907 instances a physician in general practice was the first to break the news of his having tuberculosis to the patient, and that about 1,300 patients were seen by one or more general practitioners at some time prior to their admission to a sanatorium. (See TABLE VI.) In contrast, only 148 patients were first told they had tuberculosis by a chest specialist, yet 220 first received the advice to enter a sanatorium from such a physician. Similarly, 164 patients learned they were tuberculous from a tuberculosis clinic, but 216 were advised to enter a sanatorium by such a clinic physician.

As has been said, much of the hesitancy to recommend sanatorium treatment lies with the general practitioner. There are a number of reasons for this. Mayhap the practitioner does not like the character of the sanatoria in his neighborhood; in many the latter assume the nature of a charitable institution rather than of a hospital for the treatment of disease, and frequently there is not within hundreds of miles a sanatorium to which a physician would consider it advisable to refer a patient of moderate means. Not knowing of a sanatorium of proper character, and not being able to refer his patient to a suitable one, he simply does not advise sanatorium treatment. And the one who for such a reason does not advise sanatorium treatment is more conscientious than the one who in general terms advises the patient to "go west and enter a sanatorium".

Obviously each general practitioner should know the names and addresses of the sanatoria to which he might refer his patients. He should also know something of the personalities at the head of those institutions, and, so far as possible, be able to tell the patient something of the surroundings to which it is wished to send him. But many physicians do not know how to acquire this information without great effort. There appears to be need for the superintendents of sanatoria making their institutions and themselves better known throughout the territory they serve.

Relatively more of the patients, both men and women, who first learned from a physician in general practice that they were tuberculous were in the far advanced stage on admission than those who learned the diagnosis from any other specified consultant. (See TABLE VII.) Thus

TABLE VII

THE KIND OF PHYSICIAN WHO FIRST TOLD THE PATIENT THE LATTER HAD TUBERCULOSIS WITH THE STAGE OF DISEASE ON ADMISSION FOR EACH SEX

Kind of physician who first told patient latter had tuberculosis	Total	Male				Female				
		Total	Minimal	Moderately Advanced	Far Advanced	Total	Minimal	Moderately Advanced	Far Advanced	Unrecorded
Total	1499	762	89	313	360	737	92	327	317	1
General practitioner	907	442	36	167	239	465	48	203	213	1
Tuberculosis specialist	148	67	13	37	17	81	9	40	32	—
Tuberculosis clinic	164	94	11	45	38	70	10	37	23	—
General clinic	70	46	6	20	20	24	9	5	10	—
General hospital	35	22	3	11	8	13	3	8	2	—
Sanatorium	106	48	9	20	19	58	13	23	22	—
Other specified physician	30	20	5	11	4	10	—	5	5	—
Unspecified kind of private physician	27	14	4	1	9	13	—	4	9	—
Unspecified consultant	8	6	1	1	4	2	—	2	—	—
Says never told	4	3	1	—	2	1	—	—	1	—

Notes:
General practitioner includes Company examiner.
General clinic includes home office clinic, telephone clinic, industrial clinic, unspecified clinic, outdoor department of hospital.
General hospital includes school hospital and hospital not otherwise specified.
Sanatorium includes sanatorium physician.
Other specified includes Army Medical Board, gastro-enterologist, stomach specialist, throat specialist, eye and ear specialist, heart specialist, gynecologist, surgeon, diagnostician, x-ray specialist, osteopath, advertising physician, naturopath, chiropractor.

the fact that the general practitioner, through want of familiarity with symptoms or lack of readily available diagnostic facilities, is less apt to make a diagnosis of tuberculosis than a consultant in some other category, combined with his greater hesitancy to urge his patient to place himself under sanatorium care, tends to lessen the patient's opportunity for recovery.

THE TIME ELAPSING BETWEEN THE RECOMMENDATION OF SANATORIUM TREATMENT AND THE EFFORT TO GAIN ADMISSION TO A SANATORIUM

Not every patient filed an application for admission with a sanatorium just as soon as he was told it would be best for him to do so. So much could not be expected of human nature. But 22 patients sought admission without being advised to do so by anyone; two did so before such treatment was advised; and 1,174 filed an application within one month after being told that they should. (See TABLE VIII.) So,

TABLE VIII

THE TIME ELAPSING BETWEEN THE RECOMMENDATION OF SANATORIUM TREATMENT AND THE EFFORT TO GAIN ADMISSION, BY THE SEX OF THE PATIENT

Length of time	Total	Male	Female
Total	1499	762	737
Inapplicable—not recommended	22	6	16
Before recommended	2	—	2
Less than one month	1174	608	566
One month and less than two	96	51	45
Two months and less than three	39	16	23
Three months and less than six	59	26	33
Six months and less than nine	30	15	15
Nine months and less than twelve	15	5	10
One year and over	58	32	26
Unspecified or unknown	4	3	1

while the patient may be blamed for not seeking medical advice earlier, very little reproach can attach to him because of any failure on his part to seek sanatorium treatment once it has been advised. Only one-fifth of the patients under consideration waited a month or more to make application, and one-third of these had done so by the end of the second month. Still more education of people in general as to the value of sanatorium treatment is needed when it is considered that about one-seventh of the women and one-eighth of the men waited anywhere from two months to more than a year before asking to be admitted. Of those who waited so long to file an application—both men and women—the per cent. who were far advanced when admitted was over one-fifth greater than the percentage the far advanced formed of the whole group.

LENGTH OF TIME ELAPSING BETWEEN APPLICATION TO SANATORIUM AND ADMISSION

Over one part of the time which elapses before a patient receives sanatorium care neither patient nor physician has control, except in rare instances. That is the period after request for admission has been made.

Of the 1,499 patients upon whose histories this study is based, well over half, 862 to be exact, or 58 per cent., were admitted to a sanatorium some time less than a month after making their first application to such an institution. (See TABLE IX.) An additional 406, or 27 per

TABLE IX

LENGTH OF TIME WHICH ELAPSED BETWEEN APPLICATION TO FIRST SANATORIUM AND ADMISSION

Length of time	Total	Male	Female
Total	1499	762	737
Less than one month	862	496	366
One month and less than two	270	125	145
Two months and less than three	136	60	76
Three months and less than six	178	62	116
Six months and less than nine	28	11	17
Nine months and less than twelve	13	3	10
One year and over	9	2	7
Unknown months	1	1	—
Unspecified or unknown	2	2	—

cent., were admitted within the next two months. But that 15 per cent. of these patients did not obtain admission for three months or more after seeking it is scarcely a matter for congratulation.

For some obscure reason women encountered more difficulty than men in placing themselves under sanatorium treatment, as is shown by the fact that sixty-five per cent. of the men, but only 50 per cent. of the women, were admitted within a month.

The outstanding reason why so many patients failed to enter sanatoria with reasonable promptness was that those institutions did not have an adequate number of beds. Of the 634 patients who waited a month or more to be admitted, 482 gave the want of a bed as the sole cause. If not the only reason, it undoubtedly was the chief one involved in the 94 cases in which "no difficulty" was entered in response to the inquiry regarding the nature of the difficulties encountered in gaining admission, as also in the one case in which "no material delay" was entered though five months had gone by between application and admission.

A few other causes were recorded as responsible for the delays experienced by these patients. Residence requirements were stated by eleven patients to have been the hindrance, and evidently entered into the situation in a number of instances when the patient did not so state. For example, when one patient's history indicated that she had been obliged to wait four years for admission to a certain state sanatorium, though other patients in that institution had been admitted after a much shorter interval, special inquiry elicited that beds were allotted to different sections of the state on the basis of population, and that there had been a dis-

proportionately great demand for admission by patients living in the city from which this woman came. Several patients stated that they were refused admission to the first sanatorium to which they applied because of the advanced stage of their disease, and that more time was consumed in finding a sanatorium which would accept them. A small number reported that they had been physically unable to make the journey to the sanatorium until their condition had improved. Occasionally some other reason was said to be responsible for the delay.

One cause of delay which appeared only twice in answer to the specific question as to difficulties encountered in obtaining admission, and then in combination with another reason, deserves discussion. This is the financial status of the patient. The form on which the histories were taken called for an answer to the specific question as to whether a lack of funds caused any delay in admission to the sanatorium. In 76 cases, the answer was "Yes", and in 4 others, "Probably yes." Fifty-six of the eighty patients lived in one state whose state sanatorium was so inadequate to meet the needs of the area it was expected to serve that 39 per cent. of the patients whose histories were contributed from that institution had been obliged to wait anywhere from three months up before obtaining admission. These patients would have been under sanatorium care much earlier had they possessed sufficient funds to pay for such care in a nearby private establishment. Sixteen of the remaining 24 instances were reported from private or semi-private sanatoria. As several of these sixteen were receiving free care in the institution, the financial needs apparently were family ones. This was probably the situation in the majority of the remaining instances. For example, one man reported that he was unable to leave home until he had been able to raise money for payments on a house.

Another way of gauging the part that finances play in sanatorium admission is the extent to which the patients pay their way. Of the 1,499 patients whose histories are being discussed, 135 were in private sanatoria operated for profit, and 113 others were in a private institution operated for the benefit of a corporation's employees. That a certain number of patients from such institutions should be included in the study was a matter of design; hence these numbers have no bearing upon the present discussion. But it is of interest that of the remaining 1251 patients, only 118 paid all that might be expected of them by the institution, 28 were referred to as private cases and probably paid the full charge or more, 216 paid a part of the cost of care, in 3 cases the facts were not reported, and in 886 the patient was receiving treatment without expense to himself. Leaving the corporation employees out of consideration, there was a noticeable difference in the extent to which men and women paid for sanatorium care. Of the men only 30 per cent. paid, 19 per cent. in full, 11 per cent. in part; of the women 43 per cent. did, 22 per cent. in full, and 21 per cent. in part. This is not surprising since more women than men might be expected to leave wage earners at home.

Since treatment for tuberculosis to be adequate must extend ordinarily over a long time, it requires a considerable expenditure of money. Patients who have slight or no reserve funds cannot afford to pay for such care. Whatever the reason stated by the patients upon whose histories this report is based, it is obvious that in all except a modicum of instances an inadequate supply of free beds was responsible for much of the delay they experienced before entrance to a sanatorium. This study makes it strikingly clear that, in spite of the general decline in the death rate from tuberculosis which this country has been experiencing, there exists a very real need for additional beds in public sanatoria.

Associated with this delay between the filing of the application and admission is a situation which appears to have been pretty generally overlooked, but which is of considerable moment to a goodly number of patients. A large number of patients receive no treatment of any kind during this interval. The form on which the histories for this study were taken provided for information regarding the kind or kinds of treatment advised and experienced. The information obtained about treatment does not lend itself to analysis to the extent which was hoped, but it is evident that about three-tenths of this group received no treatment between the time they were advised to enter a sanatorium and when they were admitted. In many instances, of course, the time was short and was for the most part occupied in arranging personal and family affairs in preparation for the considerable absence, but, in so far as this study is concerned, between one-fifth and one-fourth of the patients who were not under treatment during the period between recommendation of sanatorium treatment and admission did not gain entrance until at least a month after the application for admission had been made. Clinics and physicians in private practice both were culpable so far as seeing that their patients altered their usual practices. Some physicians dislike to treat tuberculosis and probably are glad to shift the treatment onto the sanatorium without thought for the interim. Others are unfamiliar with the best methods of treatment and think no harm will come from delaying treatment until such time as the sanatorium assumes jurisdiction. Evidently many physicians do not give consideration to the fact that tuberculosis frequently progresses with much rapidity and that even in those cases where it would not, rest in bed at home will facilitate improvement in the sanatorium.

SUMMARY

The question as to how much time passes before a patient is admitted to a sanatorium embraces a number of others, for many steps must be taken before a tuberculous individual is placed under institutional care.

In this study based upon 1499 special histories it was found:

1. Twelve months and a few days had elapsed after the appearance of the first symptom of tuberculosis before half of the patients had been placed under sanatorium treatment.

2. Of the cases admitted within six months after the first symptom 14.6 per cent. were in the minimal stage, 51 per cent. in the moderately advanced, and 34.5 per cent. in the far advanced.

3. Within six months after the first consultation with a physician, 54.4 per cent. of the patients were under sanatorium care.

4. Only fifty-nine per cent. of the group thought the physician had told them they had pulmonary tuberculosis the very day he made that diagnosis. An additional 28 per cent. were told within a month.

5. Half of the patients entered a sanatorium within two months after the diagnosis of pulmonary tuberculosis was made.

6. Seventy-one per cent. were told they should enter a sanatorium either before a physician had definitely diagnosed the case as one of tuberculosis or within a month after a diagnosis was first thought to have been made. Of all those who were not advised to enter a sanatorium for a year or more after the diagnosis had been made, the great majority were in the far advanced stage when admitted.

7. Sanatorium treatment was first suggested by the physician who first told the patient he had tuberculosis in 71 per cent. of the cases; by a physician consulted previously in 8 per cent.; by a physician seen subsequently in 14 per cent.; and by a lay person or the patient himself in 7 per cent.

8. Relatively more of the patients who first learned from a physician in general practice that they were tuberculous were in the far advanced stage on admission than those who learned the diagnosis from any other specified consultant.

9. Four-fifths of the patients under consideration made an effort to gain admission to a sanatorium in less than a month after sanatorium treatment had been recommended.

10. Fifty-eight per cent. of these patients were admitted to a sanatorium some time less than a month after making their first application to such an institution. Fifteen per cent. were obliged to wait three months or more.

11. The outstanding reason why so many patients failed to enter sanatoria with reasonable promptness after an application had been filed was that those institutions did not have an adequate number of beds. Next most important was the financial status of the patient.

12. Seventy-one per cent. of the patients in public sanatoria were receiving treatment without any expense to themselves.

13. About thirty per cent. of the patients received no treatment between the time they were advised to enter a sanatorium and admission.

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A CO-OCCURRENCE OF ENLARGED THYMUS AND CONGENITAL HERNIA

BY EDWARD ALLEN EDWARDS, M.D.*

THE present-day concept of the child with enlarged thymus usually postulates a lack of general development. A fact having possible bearing on this concept is the occurrence of a large percentage of cases with congenital hernia —usually inguinal—in a group of children in whom an enlarged thymus was unexpectedly found.

It is routine at the Boston City Hospital to x-ray every surgical patient under the age of 16, to determine the presence of enlarged thymus. Such x-rays number between 800 and 900 a year. The curious fact presents itself, that, out of the 26 cases of this group diagnosed as "positive" in the years 1926 to 1929, inclusive, 10, or 38.4%, were patients suffering from congenital hernia.

Incidentally, one may note that only 5 out of the total 26 were females, and there was but 1 female among the 10 patients with hernia, this being a case of umbilical hernia.

Though I have no figures on this point, it is noticeable that the *reverse* of the above is *not true*, but a small number of hernia cases showing enlarged thymus.

It is open to question whether these facts constitute coincidence or association.

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NEW ENGLAND MEDICAL COUNCIL

THE New England Medical Council convened at the Harvard Club, Boston, Mass., September 25, 1930.

The following named persons were in attendance:

Dr. B. L. Bryant, President	Dr. T. H. Lanman
Dr. John M. Birnie	Dr. Thomas W. Luce
Dr. George Blumer	Dr. Norman MacLeod
Dr. Julian A. Chase	Dr. B. W. Paddock
Dr. W. Irving Clark	Dr. David W. Parker
Dr. Philip Davis	Dr. Harold Stevens
Dr. Cecil Drinker	Dr. D. E. Sullivan
Dr. W. A. Ellingwood	Dr. C. B. Sylvester
Dr. F. T. Fulton	Dr. George C. Wilkins
Dr. R. B. Greenough	Dr. Robert H. Vose
Dr. Osmon H. Hubbard	Dr. G. E. Young
Dr. Edwin A. Hyatt	Dr. Walter P. Bowers, Secretary
Dr. R. S. Quinby	

PROGRAM

Call to order by the President, Dr. Bertram L. Bryant of Bangor, Maine.

Approval or changes in the report of the last meeting.

Report of the Committee appointed to consider the proceedings of the last meeting and submit recommendations. Dr. John M. Birnie, Chairman.

Address by Dr. Harold W. Stevens of the Harvard School of Public Health.
Subject: The Practice of Medicine in Industry.

Discussion of Dr. Stevens' paper by
Dr. Cecil Drinker, Professor of Physiology, Harvard School of Public Health.
Dr. R. S. Quinby of the Hood Rubber Company.
Dr. W. Irving Clark, Surgeon to the Norton Company, Worcester.
From the floor.

New Business.

DR. BRYANT: A brief digest of the last meeting with certain recommendations was drawn up by the President and submitted to the Executive Committee. This received their approval. It has been suggested that it be presented to the Council and incorporated in our records. As an advisory committee, if our work is to be of permanent value, there must be some method of carrying out its suggestions in the different State Associations and County Societies. For this reason this report was drawn up and submitted to the Executive Committee for suggestions and approval. With your permission the Secretary will read this report.

THE PRESIDENT'S SUMMARY OF MATTERS OF INTEREST DISCUSSED AT THE LAST MEETING OF THE NEW ENGLAND MEDICAL COUNCIL IN BOSTON

APRIL 23, 1930

RELATIONS of Physicians with
Lay Health Organizations
State Boards of Health
Industrial Medicine
Physicians in Rural Communities
Health Foundations
Accident and Industrial Work

It seems to me that the New England Medical Council can only be an advisory body, and if it is to be of value in the future there must be some plan of organization in the several State Associations through which its work can be carried out. I am suggesting to the executive committee for its consideration and criticism that each State Association, not now having such a body, appoint a Committee of Public Relations of five members to whom the work of the Council can be referred; that this committee undertake to have a like committee of coöperation appointed in each of the county societies; that these committees be made up of the more public spirited men who are interested in the future welfare of the medical profession, and who would be willing to give time and thought to help solve some of these problems that are of special interest to societies in their own locality. The membership might well include some of the local members of the New England Medical Council.

The State Committees might hold conferences and have better understanding with:

State Boards of Health,
Employers of Physicians in Industrial Work
Accident and Industrial Commissions in care of cases coming under workingmen's compensation laws,
Health Foundations,

and study the cost of medical care.

The County Committees might suggest:

Methods of organizing County Societies for participation in and supervision of lay health work, including local clinics.

How to make local hospitals health centers, with the coöperation of hospital staffs.

How to make available the material in these hospitals for clinics for meetings of County Societies.

How to work out a plan for care of the sick in rural communities in their own county.

I realize that this outline is very crude and fragmentary. I am putting it out merely as a suggestion for discussion and criticism for the executive committee, hoping that we may be able to start something of constructive value that will be of interest to the profession in the New England group.

BERTRAM L. BRYANT.

After the reading of the papers at the last meeting Dr. Bryant presented the plan now in operation in Maine as follows:

In our papers and discussions so many problems have been brought out that are of interest to the medical profession that in order to solve any it will be necessary to consider them separately.

As regards the relation of the physician to lay health organizations, I think in Maine we have a very satisfactory arrangement which seems to be functioning well.

Several years ago, there were a number of independent lay organizations in the state doing health work. An attempt was made to coördinate these groups in the formation of the Maine Public Health Association, a reorganization of the former Anti-Tuberculosis Association, and with central offices at Augusta.

The general supervision is vested in an executive committee of twelve, made up of officers and others elected by the Board of Directors. At the present time there are six physicians on the committee, which meets at the office in Augusta once a month. On the service staff we have a

Supervising Nurse
Supervisor of Child Health Education
Financial Secretary
Office Secretary and Staff
Clinic Nurse
Fourteen Field Nurses

The chief function of this Association is the education of the public in matters of health. For this purpose the work is organized under nine sections known as that of

Public Health Nursing
Health Education
Cancer Prevention
Heart Disease Prevention
Dental Hygiene
Mental Hygiene
Social Hygiene
Vision and Hearing Conservation
Section of Crippled Children

Each one of these sections is under the charge of a chairman, assisted by a small committee. Seven of these committees are made up of physicians, experts in their line of work. These committees assist in the development of the work in their particular section. All programs of work in the beginning were reviewed and approved by the Committee of Public Relations of the Maine Medical Association, then in turn by the County Medical Societies where health programs were to be carried out. It is believed that the successful development of any branch of the program depends chiefly upon the coöperation and approval of the medical profession.

The method of working is perhaps best illustrated by the management of chest clinics. Forms are sent early in the year to the officers of the county medical societies for their signatures. They are asked to indicate how many clinics they wish during the year, and a tentative date for a joint meeting of the medical society where the demonstration is desired. A full time clinic nurse then goes to the city or town indicated and helps organize the clinic. A place of meeting is selected. As many local physicians as possible are visited and are asked to send patients to the clinic. If the society has no choice of medical experts, usually members from the Committee on Tuberculosis and Heart Section are willing to serve, or will suggest experts to do the work.

No patient is admitted to the clinic except through the family physician, who is always requested to be present at the examination. Patients are given appointments and careful histories in triplicate are written beforehand for the clinician, the family physician, and the field nurse. The clinic nurse is also an x-ray technician, and carries with her a portable x-ray apparatus and is able to take all films desired. These clinics usually begin in the morning and carry on through the day. In so far as is possible, all examinations and tests are completed, x-ray films developed, and a joint meeting held with the county society in the evening, where the films are shown and the cases discussed. The clinicians have charge of the general program for the evening. Complete copies of all histories and findings of examinations, when completed, are kept on file at the home office and copies are sent to the family physician, and instructions to the local nurse to follow up when approved by him.

Similar clinics under other sections are carried on when requested by the county societies. Developed in this manner, there is complete coöperation between the medical profession and the Maine Public Health Association, and rarely is there any temporary friction which cannot be immediately cared for by consultation with all parties concerned. About sixty-five clinics have been planned for this year. Permanent and follow-up clinics are very much desired.

The work is financed by the sale of seals, by private subscription, and by town appropriations. It is the policy of the Association that health work shall be paid for by the locality in which the service is given. When a permanent nursing service is asked for, each town is requested to raise its proportionate share of money for its support; in addition, eighty per cent. of

the money from the sale of seals is retained by that locality for this work. Where scattered towns raise money and there is no organized service, a float nurse goes from place to place and gives service to the amount of money appropriated. Most of the permanent services at the present time are self-supporting.

The budget for this year calls for seventy-two thousand dollars ($72,000), a small advance over what was spent last year.

These matters are presented in detail in order that further consideration may be given to these subjects at the meeting to be held in Boston September 25, 1930.

It was voted that this report be and hereby is endorsed and it is recommended that especial consideration be given to the facts and suggestions made therein, by the several New England State Medical Societies or duly authorized committees.

The next business in order was the address of Dr. Harold W. Stevens.

DR. STEVENS: *Mr. President, Members and Guests of the Council*—When I first succeeded in getting together the material which I felt I wanted to present to you I found I had on my hands a small volume. The necessary reducing exercises through which I had to put this material have left it in a form that makes me fear somewhat that I have put myself in the position of the boy in a story given my class when I was an ambitious graduate of preparatory school. As the story goes, this boy went to his father and said: "Dad, I can't stand this old farm any longer; I've just got to get out into the world where I can spread myself." The father said: "Well, my son, that's all right; go ahead and spread yourself; but be careful not to spread yourself so thin that the world will see through you." The effect of the necessary reducing and thinning of the substance of what might be said, and that I feel should be said on this subject, accentuates my misgivings over the possibility that I may seem to have gone further than I intended in dragging out some of the skeletons of industrial medicine; but I recall that this paper is not intended primarily to be a public exhibition of industrial medicine, but rather a confession of faith, as it were, of a devotee of industrial medicine before a medical group specially constituted and fitted to sift the grain from the chaff to be found among the gleanings of experience in all parts of the field of medical practice. So, with the assurance that I get from the knowledge that we have with us to discuss this subject, men who have had much broader experience than I in the art and much deeper experience in the science of industrial medicine, I am going to give you the paper as I have it in its present form.

THE PRACTICE OF MEDICINE IN INDUSTRY*

BY HAROLD W. STEVENS, M.D.†

MEDICINE in industry seems to have become an accepted form of medical practice. Some of its enthusiasts have even ventured to call it a "New Specialty". The practice of medicine in industry, however, in so far as it remains worthy of the dignity implied in the term "practice of medicine" is much the same medicine that you or I or any of our colleagues practice according to the best traditions and standards of our profession; whereas, the economic and social features of medicine in industry that give it newness or the character of a specialty are still too little understood. The practice of medicine in industry is not yet securely founded on universally accepted principles of social ethics and universally adopted practices of business administration. Consequently the follower of medicine in industry cannot be a too thoughtful student of the medical and social background and present setting of this medical industrial experiment.

I suppose it would not be proper to omit the usual tribute to Ramazzini, the Italian physician who in 1700 published his book on the Diseases of Artificers and Tradesmen. Ramazzini's book seems to have been a pretty complete compendium of all that was known or suspected in the time of its author about the effects of occupation upon health. Sir Thomas Legge in his lecture upon "Industrial Disease Under the Mediaeval Trade Guilds" says of Ramazzini's book: "The book treats discursively in forty-three chapters of practically all trades and professions. He leaves out little except shipbuilding and the manufacture of high-explosive shells."

There seems, however, to be some difference of opinion as to the substance of Ramazzini's contribution to a science of medicine and industry. Legge remarks that apparently Ramazzini was unable to distinguish the dangerous from the offensive and says further: "When Ramazzini is dealing with the classical symptoms of mercurial tremor in mercurial gilders and workers in cinnabar mines, of lead palsy and lead cachexia among potters and painters and fibroid phthisis among stone masons his brief graphic descriptions—cannot be bettered. But amusement mainly results now from its perusal because of its extraordinary wealth in gossip,

*Address delivered at the meeting of the New England Medical Council at the Harvard Club, Boston, September 25, 1930.

†Stevens—Medical Director, Jordan Marsh Company. For record and address of author see "This Week's Issue", page 998.

old wives' tales and references, relevant and irrelevant (chiefly the latter), culled from classical and mediaeval writers on medicine."

On the other hand the name and work of Ramazzini have been abundantly honored by his own nation; and here in industrial America, in spite of his disparaging allusion to the "Americans and other barbarous nations of the New World", we not infrequently hear Ramazzini referred to as "The Father of Industrial Medicine". We are content that he should retain that distinction; but if industrial medicine in the United States is not all that might be wished, perhaps it is not too irreverent to recall the traditional law which inflicts the sins of fathers upon the children, "even to the third and fourth generations".

Another outstanding name among the pioneers of industrial medicine and industrial hygiene is Charles Turner Thackrah. His chief contribution to the literature of industrial medicine was the small volume of 124 pages published in 1831: "The Effects of the Principal Arts, Trades and Professions and of Civic States and Habits of Living on Health and Longevity". In discussing Thackrah's work Legge quotes from Sir John Simon's "English Sanitary Institutions" which refers to Thackrah's book as one of the new monumenta in modern preventive medicine comparable with the work of Jenner: "Not less meritorious than the assiduity and the care for truth with which he collected his facts, were the unprejudiced good sense and moderation with which he weighed them, and the service thus rendered by Thackrah deserves grateful recognition." Thackrah's writings evidently had a profound influence upon early industrial hygiene sentiment and legislation.

The recognition of a close interrelation between health and occupation is, however, not a matter of the last few centuries. The Roman Empire incorporated this consideration into legal statutes governing the care of slave laborers. Egypt also had statutes protecting slaves as property. It has also been said that Moses' achievement in making the public health such an important part of the religion and daily life and occupation of his people made him the first and most efficient public health official of all time.

In fact it appears that most of the civilizations at some stage and in some fashion have taken practical account of the health of their workers as a matter of importance to the welfare of society as a whole. In the words of Ramazzini: "And accordingly we find it recorded in divers monuments of Antiquity that the Founders of great Cities and Kingdoms took a particular care of workers and tradesmen."

A viewpoint, however, according any dignity to labor or consideration for the worker as an individual seems to be a relatively new idea.

Aristotle taught the Greeks that: "In the best governed states where the citizens are really men of intrinsic and not relative goodness none of them should be permitted to exercise any mechanical employment or follow merchandise as being destructive of virtue." (The Politics, Bk. VII, Chap. X.) Among the Romans Seneca in one of his letters says that the invention of transparent windows, heating devices and other material comforts "is a drudgery for the lowest slaves: philosophy lies deeper. It is not her office to teach men to use their hands. The object of her lessons is to form the mind. She is not, I maintain, the inventor of tools for everyday use——. We shall next be told that the first shoemaker was a philosopher." (Epistol. 90.)

Certainly in the civilization that forms the more immediate background of our own, contempt for the laborer persisted through the hundreds of years of serfdom in Europe and remained unaltered until after the Norman Conquest (1066). The system of trade guilds with its high standards of workmanship and its concern for the health of members advanced considerably the welfare of the crafts workers during the Middle Ages. In Europe the several centuries preceding the 19th yield the story of increasing independent sentiment of laborers for themselves; and of persistent humanizing of popular sentiment toward labor, most touching in its regard for women and child laborers. It was, however, early in the 19th century when a view more like our modern recognition of the place of the industrial worker was tersely stated in Macaulay's comment upon the views of Seneca: "For our own part, if we are forced to make a choice between the first shoemaker and the author of the three books on Anger, *we* pronounce for the shoemaker. It may be worse to be angry than to be wet; but shoes have kept millions from being wet; and we doubt whether Seneca ever kept anybody from being angry."

1802 is said to mark the first factory legislation in England: "The Health and Morals of Apprentices Act". The title of this act states quite comprehensively the purpose and the content of this legislation. In England and somewhat later in America, the years from 1802 up to early 1900 corresponding with the expansion of organized industry are filled with a rapidly increasing accumulation of labor enactments affecting workers in field and mine and factory. The laws enacted prior to 1890 were directed mostly toward safeguarding the interests of children and women workers. Following 1890 the new labor statutes were concerned more with general safety, wages and hours and concern for the economic and social rights of workers injured as the result of their industrial occupations, culminating in the general appearance of workmen's compensation measures especially since 1900.

It sometimes seems that we here in America are too prone to accept the slow, painful experience of other lands and other times as a mere

pedestal to bear aloft today's achievement. I have tried thus far to sketch for you a few of the conspicuous manifestations of concern for the reciprocal bearings of health and occupation in the past and among other peoples. The story, if complete, would include the trials and errors and achievements of innumerable sociologists and lawmakers and philosophers and physicians and other enthusiasts tending toward a more just concern for the individual in his relation with the social institution of industry; and would set forth this thought and endeavor in full progress at a time while, according to Ramazzini, our direct forbears were still among "the Americans and other barbarous nations of the New World" as yet untouched by the civilizing influence of "mechanik arts".

Workmen's Compensation is admittedly an experiment in social legislation, presumably a direct consequence of cumulative popular sentiment through many hundred years. The practice of medicine by industry is a recent American experiment initiated at a time following very closely the advent of factory inspection and workmen's compensation laws. There can be little doubt that the practice of medicine by industry was primarily a protective reaction of industry against the increasing demands of society for its workers—as it were a sort of *Employers' Compensation Measure*. In fact the National Industrial Conference Board in 1926 states that: "The primary stimulus to the introduction of medical service into industry was the increasing pressure upon the employer through the advent of factory inspection and workmen's compensation laws." It is a credit to some of the more public-spirited industrial administrators that, in addition to meeting the demand created by workmen's compensation sentiment, they accepted in a quite rational manner the unprecedented opportunity to further the cause of public health; while others with overgenerous impulse plunged too deeply into the new adventure; and, in the words of Mr. Meyer Bloomfield: "Did waste their substance in riotous welfare."

It is difficult to estimate the part that medicine itself took in the initiation of this new experiment. I recall a joint meeting of the three interests chiefly concerned in the new enterprise held in New York several years ago. Employers were represented by officials from representative industries, members of the National Industrial Conference; Medicine was represented by members of the American Association of Industrial Physicians and Surgeons; while Labor was represented by a group distinguished by the presence of Mr. Gompers. From the discussions of that meeting it appeared that each group was glad to suggest that it took a leading part in this introduction of medicine into business. Whatever may be the ultimate distribution of the "honors" there is little doubt that the names of Mock and Geier and Crowder and Elliott and Burlingame and Clark and Quinby will stand as a permanent part of the story of medicine in industry in the United States, representing the able and farseeing initial contribution of Medicine to this new enterprise.

Out of the complexity of motives incident to this newer turn of social sentiment and legal requirements there have grown up in the industries of this land many hundreds of medical services of widely varying scope of work and widely varying plans of organization. The professional staffs of these services range from the single nurse doing first-aid work to the staffs including several physicians and surgeons and other specialists providing major medical and surgical and even obstetrical care for workers and their families. In this matter of organization the National Industrial Conference Board found from several recent surveys that a little less than one-third of medical services in industry are responsible to a General Manager or higher officer.

Physical examination is, of course, the basis of all intelligent medical practice. The industrial interpretation of physical examination findings is of itself a science the complete mastery of which would stop a huge volume of waste from inappropriate job assignment. Even the partial mastery of physical interpretation such as we have achieved, if systematically applied, accomplishes valuable results; in checking contagion; in revealing curable ills; in keeping men with serious defects from jobs where such defects would be serious handicaps, or from jobs where those defects would be a menace to the men themselves, to other persons, or to property; and in prolonging the useful service of partially disabled workers.

The industrial group affords a remarkable opportunity for disseminating health information. Numerous wholesale agencies are available; posters, publications, lectures, motion pictures, tableaux and plays. The more human and dramatic the presentation, the more effective the result. The personal interview, however, that accompanies the dispensary visit is one of the most valuable opportunities of imparting helpful information.

The medical and surgical problems of the physician seriously engaged in the medicine of industry are perhaps even more varied than those that come to the physician in private practice. Traumatic surgical care is of course a part of the work of every physician in industry. Few of these surgical problems are unique and require special technique peculiar to their industrial origin. The industrial situation, however, affords unprecedented opportunity of preventing secondary infection. Then there is the group of specific industrial diseases, relatively small, and growing smaller in fact of incidence as knowledge of environmental control is extended. Specific industrial diseases are those which like industrial injuries are legally recognized in

some states as arising from specific conditions of work environment assumed to be under the administrative control of industry. Industrial poisonings comprise the majority of this group. The name of our Dr. Alice Hamilton is inseparably associated with our knowledge and practice of industrial toxicology. Apparently these poisonings are due to be still further reduced by the advance precautionary studies being made by some of the larger industries before the introduction of new industrial process. The careful preliminary studies of the carbon monoxide hazard that made the atmosphere of the finished Holland vehicular tunnel actually safer than that of some of New York's down-town streets is a dramatic illustration of the grand-scale forestalling of industrial hazard. Competent safety and sanitary engineering is already adequate to the problem of preventing most specific industrial diseases as well as injuries in well-organized industries. Nevertheless, while the incidence of industrial disease is low, being in 1928 only 1.6% of all industrial accidents in Massachusetts, the death rate is distinctly higher, being 4.6%, while the total permanent disability is very high, being 33.3% for the same year. Hence while industry continues to make use of materials, poisonous or otherwise injurious, and to invent new processes there will be need of perpetual vigilance on the part of those responsible for the health of workers to detect possible insidious effects of new materials or combinations and new situations created by industry. Occasionally to the diligent searcher comes the satisfaction of identifying some new disease, as to our Dr. Drinker in his study of manganese poisoning. The great majority, however, of the physical complaints that come to the attention of the physician in industry are sickness and injury that have no recognized origin in conditions of work; but are much the same troubles that come to us wherever we work or whether we work or not.

It is of course possible to deduce the presumption that many cases of disability and indisposition are indirectly caused by conditions of living that accompany organized industry. For example, imperfect ventilation and illumination, "ultra-violet" deficiency and the "strain and stress" of industrial competition may be the cause of specific disease conditions yet to be identified. As a counterbalance, however, to enthusiasm for extending the range of compensable disability we must keep in mind the high proportion of already compensated disability that arises from carelessness, poor coördination, and other physical and mental characteristics of the employee himself. In some plants this proportion runs as high as 80 or 90%; for the State of Massachusetts in 1928 it was over 60%. Certainly we want to know the truth of these matters, but is industrial management responsible for all the ills of an industrial society? Industrial physicians are not the logical protagonists of Ramazzini. He and other students of occupational disease for two hundred years or more stood on the side of society protecting itself against the unsocial practices of business. The physician practicing within an industrial organization today, so long as he is consistent with the logic of his position, stands upon the side of industry protecting itself against possible oversentimental social demands. Between these two antagonists stand our governmental departments of Labor and Industries, seeming to the partisan of either side too much preoccupied with maintaining the delicate balance of a discreet impartiality. Whatever our affiliation, we must not let vague inference and suspicion take the place of facts in issues affecting the balance of individual and social responsibility. Present workmen's compensation measures leave sometimes as much as 90% of all physical complaints to be dealt with by the industrial physician as having no recognized cause in industry. In the management of these *non-industrial cases* lies perhaps the greatest public health opportunity of the industrial physician.

Among the thousands of cases which I have seen in my industrial practice I recall vividly some of the severe pneumonias and the acute appendices that were caught and taken care of hours, perhaps days, earlier than they might otherwise have been. I have seen patients salvaged, almost miraculously, from the inevitable total disability from thyroid-heart combinations and other serious chronic conditions through the combined efforts of industrial physician and other physicians in private and hospital practice. I shall never forget some of the thorough dental housecleanings that have replaced a ghastly grin by a wholesome smile, to say nothing of an immeasurable improvement in health. It is, however, the opportunity to enter with the patient into the personal industrial social problem, of which physical diagnosis is a mere detail, that makes the individual case stand out most vividly in recollection.

It is these cases that give the industrial physician the assurance, which he sometimes needs, that he is still practicing medicine; but many of these cases are not so unlike hundreds that you recall from your own experience. I should like, however, to refer to one case because it indicates the impossibility of avoiding in industrial practice some responsible dealing with matters not conventionally medical. This case was a tangle including the personal hopes and fears and business interests of at least a dozen individuals within and outside the organization; young and old, male and female, the president and other administrative officers of the company, everyday workers, fathers and mothers, brothers and sisters and friends. The medical facts involved were illegitimate pregnancy, gonorrhoea and a question of dementia praecox. There were financial considerations that concerned several business houses and

banks. Intense social and antisocial emotions raised the spectres of criminal abortion, suicide, murder and penal institutions. I will not go further into the story; but only add that for certain reasons perfectly obvious from the story itself the business accepted a considerable degree of responsibility for this complex involvement. As medical director I was called upon for advice on the medical questions; and upon this part of the problem I secured the help of two other physicians. Before the affair was settled, however, I was required to give my judgment upon difficult questions of employment relations, of administrative policy and upon exceedingly difficult family questions that were not medical and did not directly concern the business itself. I recall at one stage of the affair that my director said feelingly: "Doctor, it's worth a thousand dollars to get that off my mind." Perhaps I might add that of all the spectres which threatened the only one that actually materialized was that of the prison bars which eventually solved, or at least very much simplified, the financial and social complications of the young man who was the chief culprit.

Questions of conflicting authority, of professional income and of ethics and etiquette in the relations of the industrial physician and the physician in private practice are liable to arise under the present uncertainty of definition. I must say at once, however, that such questions have come to me much more frequently as hypothetical problems than as actual issues; I believe this is the usual experience. I know of many instances of sincere coöperation of industrial physicians and physicians in private practice thereby securing to the patient benefits otherwise impossible. I also know that many workers go to the plant dispensary for advice that would never have gone to any physician if it had meant a home call or an office visit to the family physician. I am sure it is possible to pick instances in which a plant physician has cared for a case that might have gone to a private physician and paid his fee. On the other side of the balance I know of many workers who, as the result of advice or urging of the industrial physician, have gone early to their own physicians or to consultants or hospitals when they would otherwise not have gone at all. The net effect upon the income of private practice is impossible to estimate. While these questions do occasionally arise I believe it has been the common experience that they do not appear as serious issues at the level of the personal or professional relations of the physicians concerned but rather as problems having their roots deep in the substance of our industrial and social systems.

The physician in industry happily situated in his relations with the administration of his business and with abundant available medical resources within and without the plant may go serenely on in an agreeable and successful practice. If, however, he is not among the fortunate minority of industrial physicians who have been given definite administrative responsibility, or who are directly responsible to broad-minded administrative officials, regardless of the abundance of medical facilities at his command, he cannot always escape misgivings over the ultimate bearings of his purely medical and surgical activities. His scientific approach to the broader health problems of his organization may be blocked by official indifference or opposition. In the course of his dealings with employment management, welfare management, and local disability benefit activities the physician responsible for the executive acts of an industrial medical service is constantly beset with opportunities, or importunities, to substitute expediency, sometimes of a rather cheap sort, for the honest judgment of his profession. Any physician in industry, alert to all the bearings of his professional activities, must observe that his patients are sometimes dropped from the organization amid circumstances that force him to believe that his zeal as a physician has been the undoing of his patient as an employee. It is difficult indeed to square these facts with the good old principle that the viewpoint of the true physician is the singleminded purpose to help his patient to solve his problem arising out of his physical difficulty rather than to help an employer solve his problem arising from the same set of facts. Too often he confronts a dilemma in which his sincere desire and effort to be helpful in a manner worthy of an enlightened business brings only the complaint that he is obstinate and uncoöperative. In the face of such misgivings, unlimited tact and patience are the only salvation of the physician for he must constantly realize that, while open-minded adaptability is an important qualification for his job, an even more important one is clear-visioned courage in maintaining the best ideals of pure medical practice. Improvement in this portion of the field of industrial medicine waits, in some degree, upon extending medical ideas to a more practical grasp of the economics of health and disability; but perhaps even more upon sounder social principles on the part of management in dealing with the business aspects of health and other personal matters.

I believe that the purpose of this paper justifies a brief account of the medical service of one New England business. About ten years ago this business, a large mercantile establishment, appealed for advice to the medical faculty of Harvard University. Under the direction of the School a survey was made which led to certain initial sanitary corrections; also after careful deliberation a full time physician and other selected personnel were added to the preëxisting nucleus of medical work represented by several nurses. Finally a special department, the Health Department, was created under the executive charge of the physician and under the

direct administrative charge of a director of the corporation.

During the subsequent years the Health Department grew in scope and volume of activities and in personnel. Dental service was added during the third year of the Department. At about this time a second physician was added to the staff on a half-time basis. There was continuous expansion in outside professional contacts. Also the health service of this business was frequently invited to participate in public health activities of the community, both official and non-official.

In some respects the administrative policies concerning this health service were never very explicitly defined. The general purpose of the administration together with official misgivings over the dangers sensed are, I think, rather well reflected by the business official immediately responsible for the health service in a speech made in New York before The National Retail Dry Goods Association. At the beginning of this address the prestige of the names of Johns Hopkins and Harvard was invoked. Later on such declarations as this were freely made: "Our people are told that they can go to our physicians with the same privacy that they go to their family physicians with, and we mean it and they know it." On the question of fear that the personal medical records might be used against workers by the Employment Office this statement was made: "We have learned they know better. The result is that our Health Department contains carefully locked under the supervision of the doctor and his secretary many thousands of health records which—are of tremendous value in following up the health conditions of our people. No patient ever objects to these records being made any more than he would by his own family physician. That is one of the many things we have learned from experience."

But other years brought swift changes. Under a bankers' merger the former autonomy of this business was lost. Then came the anxious months of depression in the market value of securities and in trade. The administrative officers under whom the health service had been fostered became separated from active participation in the business and no longer guided its destiny. Curtailment was one of the conspicuous measures of the new policy. As one feature of retrenchment both physicians were dismissed without notice and without comment upon provision for the future integrity of the professional contributions of the several physicians whose personal services had entered into the development of this health service; or that of innumerable family physicians and consultants and hospitals, the records of whose contributions had become parts of the personal medical records accumulated. Other reductions in personnel were summarily made; and the health service left, in effect, under the immediate supervision of subordinate personnel executives, nonprofessional in the matter of training and unprofessional in the matter of an appreciation of principle as contrasted with short-visioned expedient as a guide in personnel management. I believe this too should be said: that, while the policy which guided the earlier years of this health service has apparently been abandoned, the personal medical records of the former system have been used by the new management in an employment relation issue to its own advantage and to the disadvantage of the employee, as a former patient, in violation of the professed confidential relation in which the records were made.

Such a default of a significant experiment in industrial medicine reveals one of the worst possibilities under our present lack of any standardized control. No reasonable person with an elementary understanding of modern business could object to curtailment of any phase of a business judged by its administration to be relatively less important than others. It is, however, most disquieting to realize that by a mere financial transaction the complete control of a business, including a professional service, may be acquired by a new management which can with impunity realize material and financial advantage from professional sanctions conditioned by pledges of the former administration which it does not see fit to support. It is distressing beyond expression to realize that at present there is no check nor control whatever upon such perversion and misapplication of the contributions of physicians or medical institutions to the development of medicine in industry. Such breach of faith in a purely financial matter would not be tolerated in business; but, so far as I know, breach of business faith concerning medical matters must be for the present its own reward.

After three years of study into the demand for more satisfactory correlation of *need, facilities* and *financial resources* for medical care, our national Committee on the "Costs of Medical Care" brings forth an advance announcement of a "First Principle," stated by the chairman, Dr. Ray Lyman Wilbur: "The personal relation between physician and patient must be preserved in any effective system of medical service." The fact that physicians, sociologists, business men and others engaged in this study agree upon that as a "First Principle" seems evidence that the Committee is finding *quality* rather than *cost* at the heart of this question of more satisfactory medical service. The coincidence of the announcement of this principle with the instance of change in business policy which I have just related is a startling illustration of the wide chasm between the medical ideas of some business officials and the maturer thoughts of representative men in many fields upon the important principles of medical practice. If industrial medicine is to be a permanent part of the service of our profession to the community,

Medicine and Business must work out together some code safeguarding those principles and governing alike physicians and industrial officials engaged in the joint undertaking of the practice of group industrial medicine.

As I reflect upon the personal relations of my own practice of medicine in a business organization I am more convinced that keeping faith with a patient in the finest ethical sense is not a narrow, sentimental consideration; but rather a businesslike handling of a personal situation upon as broad a social basis as the individual can be induced to accept as his own view. The maintenance of the personal relation inviolate does not mean entering into a secret compact with a patient to conceal or isolate his personal problem; it may mean entering with him into the intimate bearings of his personal problem upon the personal problems of other people; and with sympathetic patience and balanced sense of social justice following with him the trail of those personal interrelations however far it may lead, or so far as the ministrations of a physician have any helpful significance. At moments I have even imagined that in industrial medicine under broad-minded business men and under socially and economically-minded physicians we have the clue to the most human socializing of medicine. I have even imagined that our intimate experience in industry with the social counterparts of physical and mental inferiority yields a clue to substantial aid in some of these vexing social and political issues that arise from the unsocial behavior of unsocial people who demand for themselves more of the benefits of organized society than they could ever repay in kind or equivalent.

Thus, Gentlemen, I hope I have suggested some of the tasks and opportunities at hand for the physician responsible for the care of industrial workers. These are in the first instance medical and surgical; but, whether we wish it or not, we cannot avoid some regard for the social bearing of these medical and surgical problems which are our daily "cases". Any physician who identifies himself with medicine in industry by that token adds to the effectual consequences of his medical practice a certain special significance inherent in its industrial relations and unique in the history of medicine. The only effective choice he can exercise is in the decision whether he will endeavor to guide his professional activities toward consequences that are socially and economically sound and just; or, on the other hand, concede that priceless opportunity to others, for the most part less well qualified. If he chooses to resign that opportunity, it seems to me he thereby resigns a part of the dignity which is his professional birthright; and acknowledges his industrial activities to be something less than the practice of medicine.

In the meantime, somewhat apart from medical practice, there are biologic-economic questions of society crying to be answered. Industry is still groping for methods of genuinely scientific management of its human resources. Employers, publicists, economists and statesmen and students of international relations are wrestling with unemployment, which has distinct public health elements. The Costs of Medical Care is declared to be the "Great Outstanding Problem of Medicine."

Keen scientific students are approaching these problems at angles different from the viewpoint of medical practice. Among these are workers at a number of our institutions of learning; all working at some question of biological physics or chemistry, of physiology or psychology. One of the more conspicuous of these studies before us at the present is that in which Dr. Mayo of the Harvard Business School and Prof. Turner of Technology, together with certain of the business officials, have been engaged at the Western Electric Company in Chicago. Briefly stated, the outstanding revelation of certain carefully controlled experiments has been the presence of some factor which has upset results expected upon assumptions usually regarded as physiological facts. For example, there was found a distinct improvement in certain processes of production coincident with reduction of illumination to a degree of very poor visibility. The only possible explanation of these paradoxical results was the assumption of some unrecognized influence derived from the circumstances or from the individual who directed the workers of the experimental groups. Thus we are led to the inference that industrial fatigue and disability are matters dependent not entirely upon illumination and ventilation and hours, or upon gross physical defect or disease or lactic acid content of muscles, but also upon other conditions affecting the capacity for sustained attention, chief among which is the *quality of supervision.*

In a recent group discussion of these experiments one conspicuous question of physicians and business men was: "What's new about that?" One answer is, of course, that there's nothing new in truth itself. An ancient statesman, speaking to a people that amid political and military distractions had become faint-hearted and ineffectual, said: "Hast thou not known? Hast thou not heard? The Everlasting God—*Creator* of the *ends* of the *earth,* fainteth not neither is weary;—They that *wait* upon the Lord shall renew *their* strength." The newness comes when an age-old human truth which has already found beautiful expression in literature and art comes to be recognized as having an important meaning for modern business. I am sure I never should have dared to introduce such poetizing into a discussion of Dr. Mayo's studies, but for a remark of Dr. Mayo himself. After a meeting at which he had discussed the Western Electric experiments I

asked him if he would care to say any more about the personality and the character of the supervising individual whose influence upon the experimental workers was probably greatest. I was hoping for some concrete statement, perhaps some practical application of the newer "conditioned reflex" ideas of neuro-physiology. Dr. Mayo answered: "Well—I think we shall have to say, 'He is one sent from the Lord.' "

The "results" of these experiments of the Western Electric seem to be mainly psychological concepts which must presumably be reduced to substantial physiological concepts before they are likely to be applied systematically by business administration. Nevertheless these results seem to have accomplished for the first time something concrete in the way of an experimental approach to the identification and control of certain important factors in industry and society hitherto conceived and dealt with only as the vaguest impressions. These experimental demonstrations give us just an inkling of possibilities in the release and direction of reserves of potential energy that may well mean more to industry than did the miracle-working discovery of the properties of coal and oil and electricity. I suspect that when we shall have devised the special mechanisms of business organization which shall dispel unnecessary fatigue and bring under control this reserve of industrial energy it will prove to be some means of maintaining *attention* to more *stable* and *worthy* objectives—not so different from the things in the mind of the old statesman when he exhorted his people to "*Wait* upon the Lord."

Thus excellent and promising work is being carried forward by medical men not engaged in active practice and by others whom some of us may think of a bit disparagingly as "lay minds". Medical history continues to bear witness to timely stimulus even from lay minds and minds of other professions. I shall not soon forget the meeting of our American Medical Association in Washington in 1927. One thought set forth in the address of the new president of the Association was the suggestion that the dramatic achievements of medicine are probably mostly in the past. Immediately after this speech Mr. Coolidge gave to the Assembly his message one portion of which was apparently directed in answer to the somewhat discouraging suggestion of the official leader of our profession. One concise declaration of Mr. Coolidge might well become a motto of the scientist in any field. "We have located a few fixed stars in the firmament of truth; doubtless there are many more yet to be discovered." The essential content of some of this non-medical or semimedical work is separated by a very thin veil, if at all, from the biological truths among which the practicing members of our profession find the substance of their activities. In fact I wonder if it may be leading us toward a hygiene of industry more effectual than the approach of medical practice has been with its program based so largely upon the concepts of pathology.

I am told that Dr. Richard Cabot in the early part of his experience with army medical work made this remark: "I never before realized what a perfectly terrible thing Health is." Most of us feel the same way when confronted with some of these semimedical or extramedical health questions of peace. We are often at a loss to know what to do with the rest of a man after we have done the best we can with his pathological conditions. Especially since the War it seems there has been a growth of more dynamic ideas about disease and health. It seems probable that most of us who practice medicine outside of industry will practice at least *for* members of an industrial society in which health will have more and more concrete economic significance; while within industry many signs point to the coming of the time when the application of genuine physiological knowledge to the human relations of business will be a function of business administration as firmly established as financial accounting.

The future of medicine in industry, as well as that of all organized medicine, is inevitably involved with the future of business administration. Sidney Webb's writings, notably his book "The Works Manager Today", published in 1918, is referred to as a forerunner of a new enlightenment in business management. His chapters upon "Welfare" and upon "Manners of Management" touch pertinently some of the health and other personnel problems of management today. As another indication of what it seems reasonable to expect in business management I should like to refer you to the addresses made at the dedication of the new buildings of the Harvard School of Business Administration in 1927. In particular I would recall a few remarks from the address of Mr. Owen Young. "The founders of Harvard said that they 'dreaded to leave an illiterate ministry to the churches when our present ministers shall lie in the dust'.—But why this new profession of business? The old art had functioned long and well. —Then the widening area of business outstripped all local sanctions and tended to leave the individual free from all restraints except those of the law. Now the law—functions only in the clear light of wrong doing—things so wrong that the community must protect itself against them. Set over against the law—is the clear light of right doing—things so generally appealing to the conscience of all that no mistake could be made no matter how complicated the business. The area of difficulty for business lies in the penumbra between the two.—It was in this shadowed space that troublesome practices were born.—What I have said as to the deficiencies of business is not in any spirit of criticism of the motives or activities of the men who have gone before or of the men who are administer-

ing it now. I say it only with the purpose of recognizing certain problems which will challenge the young men who are coming on.—It is those things that remain undone that we must frankly face and earnestly endeavor to correct. —I am sure we could serve Mr. Baker no better than to assure him that the Harvard School of Business Administration will do its utmost to guard against an illiterate ministry of business when our present ministers shall lie in the dust.

"Today the profession of business at Harvard formally makes its bow to its older brothers and holds its head high with the faith of youth. Today we light the fires in the temple which it is the trust of Harvard to maintain and from which may be renewed through generation after generation the high ideals, the sound principles, the glorious traditions, which make a profession."

Evidently these words spoken at that dedication three years ago were not mere symptoms of local sentimental enthusiasm. Within the last few months a token of *nation-wide* interest in the future of this new profession has come in the announcement of the "Two Hundred Fifty Associates of the Harvard Business School", a group including many of the more significant names in American industry; all contributing to a fund and supporting with personal participation the researches of the Business School. It is the purpose of these researches to turn the light of scientific method upon the entire field of business activities; certainly that light must touch the still shadowy and neglected portion of the field which has been the scene of our medical experiment.

The zeal and the high purpose of this newest profession in the field of human affairs cannot but affect profoundly the affairs of our own. If industrial medicine is to continue, or if new forms of social medicine are to come, there could hardly be a field more favorable for a fair and safe trial than one in which the two chief elements concerned, medicine and finance, shall be in the keeping of two learned professions. We physicians cannot afford to be idle or protesting witnesses of inevitable progress. I believe we must take steps to safeguard that "First Principle" and other exceedingly important principles before our hand is forced to participation in immature political schemes of social medicine less thoroughly planned than the introduction of medical practice into industry. The fact that industrial medicine has shown such healthy growth, even in that dim penumbra zone of business is a tribute to the men, medical and non-medical, who have been immediately concerned with its practice; and I believe prophetic of its possibilities if brought out into the clear light of unequivocal medical and business principles. With our recent industrial experience added to our wealth of medical experience in the past and with the support of the professional standards being raised in business, I believe we are ready to take steps toward securing the social requirement that not only physicians, but also the responsible officials of corporations employing physicians or otherwise engaged in the practice of group medical activities, shall *qualify*, be *registered* and be *governed* by appropriate standards of *medical ethics* and of *business management*.

I suppose that many of you knew personally Dr. Frederick Shattuck. Some of you may know of his keen interest in promoting the practice of medicine in industry. One day, in his intense, emphatic manner he was discussing the difficulty presented by the unprogressive attitude of a certain business executive. "How old is he?" asked Dr. Shattuck. "About sixty-five", was the answer. "Oh, well, the Lord will take care of him."

You may recall how Dr. Shattuck loved to observe the ways of the Lord in the affairs of our profession. I imagine that more than one of us remembers his counsel of patience in the words: "For a thousand years in Thy sight are but as yesterday when it is past, and as a watch in the night." We have rarely among us such a prophet of medical practice to illumine the human relations and bearings of our medical activities; but I believe a less gifted observer of signs already visible may safely predict that we are soon to see a more business-like practice of medicine and a more professional practice of business joined in the common task of meeting more of these insistent demands of our social economy.

Discussion

Dr. Bryant: Until luncheon time, we will go on with the discussion of Dr. Stevens' paper, and defer the report of Dr. Birnie's Committee until later. I will call upon Dr. Quinby to open the discussion as he is limited for time and must leave shortly.

Dr. Quinby: Dr. Stevens deserves great credit for the completeness of his paper. He leaves little to the field of discussion.

Industry today occupies a place in the forefront of our community life. Its remarkable discoveries and developments have within a brief span of years revolutionized our everyday life. The telegraph, telephone, radio, automobile and airplane are only several striking examples. Our homes and offices reflect at every turn these industrial developments.

The raw materials composing these necessities and luxuries of today have always been existent. The ingenuity and resourcefulness of man has converted them into tangible usefulness. It is not strange that with the tremendous growth of industry, the vital economic importance of man's health should come to the realization of industrial managers and that active steps should

be taken by them to create and conserve this asset.

Neither is it strange that with no guideposts the application of medicine to industry should have been faltering. Industrialists saw indistinctly the goal they sought to attain, but knew nothing of the procedures of attainment. Such physicians as entered industrial practice in its earlier days had certain knowledge of medicine and surgery, but no acquaintance with industrial conditions, nor were they aware of the manner in which this knowledge might be effectively applied to the solution of the problems of industry. Quite naturally their status in medicine and industry was challenged.

Dispensary treatment of accidental injuries was the important function in the early history of the association of medicine and industry. Soon it became apparent that a sick man was as useless to industry as an injured man, and provisions for simple treatment and advice were added. Questions then arose as to whether certain men were able to do certain types of work and whether certain processes, materials or environments exerted a deleterious effect on health. With the War and subsequently, efforts to select and assign workers to jobs they were best fitted to perform were more intelligently and forcefully pursued.

The doctor, through physical examination of applicants and on occasion of transfer of present employees to new work, has become an important factor in this placement program and at the same time developed the real foundation for preventive and constructive medical work in industry.

Other problems involving health have gravitated to and been developed by the industrial physician until today we see in most large plants a health program including roughly the following functions:

I. Physical examination of new workers and reëxamination under varying schedules of present employees.
II. Dispensary treatment of injuries and illness occurring during work.
III. Advice and assistance in securing necessary remedial and corrective treatment as a result of discovery of defects at examination or from development of disease.
IV. Control of work conditions which might adversely affect the health of workers. These problems may involve accident prevention, sanitation, toxicology, contagion, unusual physiological requirements, or even sociological problems.
V. Coöperative control of problems involved in workmen's compensation cases or disability cases affected by any beneficial or group insurance plans.
VI. Liaison relationship with practising physicians in the community, hospitals and all health agencies contacting with workers employed.
VII. General supervision and control of all factors having to do with the health of the employed group.

These then are some of the efforts of industry through medicine to safeguard and improve the health of its workers. To industry they seem necessary and sane. They will be improved and better understood. The fact that the New England Medical Council selects for its program today the subject of "The Practice of Medicine in Industry", that the Shattuck lecture of the annual Massachusetts Medical Society meeting was entitled "Industrial Medicine and Public Health", that the American Medical Association, American Public Health Association and many other state and national associations interested in health are giving recognition to this subject are encouraging evidences of sound and permanent development.

Having viewed the development of Medicine in Industry during most of its active growth, observed the growing recognition of this branch of medicine by the profession, and known intimately the real attitude of a great many industrial leaders toward this portion of their personnel programs, I feel optimistic concerning the future of Medicine in Industry.

Dr. Cecil Drinker, of the Harvard School of Public Health, was called upon to continue the discussion.

DR. DRINKER: *Mr. President and Gentlemen* —I suppose that one of the symptoms of the entrenchment of a subject in modern medicine is the degree to which it has been established in a prominent medical school. As Dr. Stevens has recalled, Dr. Frederick C. Shattuck in 1917 got the idea that medicine had a possible interest—and since it was in accord with his very practical views—perhaps a very profitable interest in industry. He thought it ought to be possible to establish an investigating and practising unit in industrial medicine in the Harvard Medical School which would be both self-supporting and profitable. He believed that the Medical School ought to be able to receive problems of health in industry and manage them through a staff permanently in the employ of the University.

Dr. Shattuck collected a moderate amount of money and a beginning was made, but it became apparent, as anyone might expect, that nothing of the sort he had originally in mind could be done. It would require a staff of indefinite size and it would be so expensive to run as to make the possibility of support practically impossible. We have gradually put together several departments, first in the Medical School but now moved into the building of the School of Public Health, capable of investigating abstract problems in relation to medical matters as they

occur in industry, and also capable of giving consulting advice.

I can illustrate the nature of the development in a variety of ways. We now have two departments permanently concerned with laboratory work and housed in the School of Public Health, one under the direction of my brother, Mr. Philip Drinker, who by training is a chemical engineer, and the other concerned with physiological and medical matters, taken care of by myself. We have a permanent budget of a little over $40,000 a year. To this, from year to year, sums of varying size are added by industry for the investigation of special problems. Some years ago, for example, the National Organization of Manufacturers of Lead and Lead Products gave the sum of $51,000 to be spent during three years wholly at the discretion of the University authorities and with entire privilege, as is necessary in all cases, in regard to publication of results. This particular gift resulted in information about lead poisoning as regards diagnosis and treatment which was quite unique, and, in so far as treatment is concerned, somewhat revolutionary, and governing the practice today in lead cases.

Our first large item of permanent equipment was a room for studying controlled conditions of temperature and humidity on physical work. We can make temperatures from freezing to 212° Fahrenheit, with an absolute control of humidity. Out of the experience gained in this room, which was designed to study work under various atmospheric conditions, we were able to construct a room for the treatment of premature infants, summer diarrheas, etc. The first of these was built in the Children's Hospital, and today rooms of a similar sort are being constructed all over the country. This is a necessary overflow of interest in a specific field which must be of benefit to medicine.

For a number of years it has been our duty to test all sorts of devices for restoring respiration in cases of asphyxiation from gas, etc. Out of that experience, on the part of my brother and Mr. Shaw, came the idea and development of a respirator designed for the prolonged administration of artificial respiration.

We work over two sorts of problems. The problems offered by industrial processes are wholly specific or wholly unspecific. Specific problems are offered by the new substances which are constantly being devised, used in industry and sold to the public. You all have in mind recent instances of such things. The poisoning due to methyl chloride used as a refrigerant is a direct example. If the tetra-ethyl lead which caused numerous fatalities some years ago had had proper medical supervision before manufacturing, not only would a number of fatalities have been avoided, but the substance would have reached the market in safe shape much sooner than it did and an enormous expense would have been avoided. Things of that kind are very specific, very numerous, and sometimes extraordinarily stimulating to the investigator. I think it is certain that the new types of diseases which enter medicine in the next hundred years are going to be contributed in far greater proportion by industry than from any other source. In the twelve years that I have been connected with these problems I have seen three conditions, quite novel,—one Dr. Stevens mentioned in regard to the manganese workers; second, the extreme necrosis of bone in the radium workers; and, third, the extraordinary encephalitis from lead tetra-ethyl. When one is asked to examine a case wholly bizarre in itself and with no reference to preëxisting information, it is a novel experience and one most attractive to anyone in medicine. We have investigated, so far as these specific problems are concerned, many things. We are concerned, now, with problems of fibrosis of the lungs due to dust of various types. In this work my brother's group of engineers are concerned in devising methods for quantitating and removing dust which would be fully adequate for any given substance.

We have been concerned much more in the past few years with the very important matter of investigating problems of human efficiency. This is the sort of thing I mean when I speak of a non-specific problem. During the war you heard a great deal about industrial fatigue. I doubt if anyone has found anything that will contribute much to the general cause of fatigue. We are concerned now with tests of circulatory and respiratory efficiency, tests for the ability to stand high temperatures and to work successfully under the stress of heat for a number of hours. For example, in certain industries men are subjected to temperatures as high as 212° Fahrenheit for periods of time up to twenty minutes. They are soaked with water and go in and do their work and get out before they begin to actually burn. Under exposures to such high temperatures, cramps from the heat are very frequent and very distressing, and sometimes wholly disqualify people for work. It was shown by the younger Haldane that this particular variety of distressing cramp was due to lack of salt, and that if they would drink water with a very moderate amount of sodium chloride in it they would have no difficulty and would be able to continue with their work. Sometimes the solution of a problem is as simple as that. But, generally, the problem is extraordinarily illusive and as difficult as most of the puzzling problems in physiology can be. It is a useful thing to have a working organization in a medical school begin to concern itself with these matters because we cannot get away from them. The medical profession is being called upon to give advice in the problems of industry and will continue to be.

I should be disinclined to think that the departments my brother and I represent should expand very much further. That which we now have seems to me to represent a fair degree of recognition of this subject from the point of view of investigation and teaching of certain fundamental matters in the School. We have from eight to twenty students a year, most of whom come for special things, e.g., a man comes from New York to spend three or four weeks entirely in the study of carbon monoxide poisoning; others come and spend the entire year learning whatever we have to offer, almost always the major part of the time being spent upon some special problem. It would be a great pleasure to us at the school if some of you when you have time and are in the neighborhood would drop in and see us. You will see not only this heat and humidity installation, the rooms for exposures to poisonous dust and other poisons, but a new installation capable of giving us the effect of an altitude a little below that of Mt. Everest, with temperature and humidity within reason. We can also develop in the same installation positive pressures, and will be enabled with the entire arrangement to go into other questions of oxygen treatment in connection with disease.

Dr. Clark and Dr. Quinby are conversant with the clinical and sociological aspects of industrial medicine into which Dr. Stevens has gone, and I have attempted to give you a little information of what the Harvard School of Public Health has felt it proper to do as a recognition of the progress this particular subject has made.

Recess for luncheon.
Reassembled at 2:10 P. M.

DR. CLARK: *Mr. Chairman and Gentlemen*—Doctor Stevens has given us a very interesting paper. Doctor Drinker has told us about what is being done at the School of Public Health, and it is left to me to finish by representing the doctors who give full time to the practice of industrial medicine.

First, I wish to point out that the practice of industrial medicine is preventive rather than curative. The amount of therapeutic medicine practiced in the dispensary work of industrial medical departments is almost negligible. Diagnosis is the important feature. The effort of the industrial physician is to make an early diagnosis and to see that the patient receives prompt and proper medical care either from the family physician or through a dispensary or clinic.

He is in effect a medical clearing house, and tells the worker what he should do and where he should go; whether to his family physician or to his dentist or, perhaps, to continue to work. If the patient continues at work, usually some simple treatment is given, the object being not so much to effect a cure as to have the patient feel that something is being done for him and in order to keep him under observation.

Coöperation with the family physician is of great value when it can be obtained. Unfortunately, this contact is often very weak. The industrial physician, though he should, frequently does not get into direct contact with the family physicians of employees sent home because of sickness, and the family physician seldom consults the industrial physician about a case. A closer contact would improve relations materially and would be of value to both groups.

The records on file regarding the physical condition of workers are of considerable value to the family physician as they extend over a long period. These records, while brief, contain the essential facts and fix dates accurately.

I wish particularly to speak about industrial surgery because this subject has not been touched on. There are two kinds of industrial surgery being practiced, preventive and therapeutic.

Preventive Surgery consists in the immediate treatment of any surgical condition which arises while a man is at work. The promptness of this treatment enables industry to produce a record of asepsis that closely parallels the records of a first-class hospital. We find that an average of ½ of 1% of injuries become infected, and when one realizes how many accidents occur in the larger workshops one should appreciate the almost universal application of standardized surgical technic. Next it is important to provide proper definitive surgical treatment at the proper time, and we know that we have frequently thereby reduced prolonged disability.

Operative surgery is done in a few factories, in hospitals maintained by the factories themselves, but in most cases the work is done at a neighboring general hospital. Here, the industrial surgeon may be the operator, or the case may be handled by the general staff. But in any event the industrial surgeon endeavors through close contact with the workman to get him back on productive labor at the earliest moment it is safe. The speed with which men can be returned to work is surprising to those who are not in close contact with factory methods. This is of distinct advantage to the worker and he appreciates it. Naturally, it requires judgment not to start a man working too soon. That would be a very serious error, and must be avoided.

Last, it is the duty of the industrial surgeon to follow the case until he is entirely well even if this covers a long time, and to record the progress of the case, and finally the true end result. Just last week I was able to report back to the surgeon the end result of a tarsal fusion which he had performed three years ago.

The last thing I am going to speak of is Ethics. It is a simple thing when you follow it through. I think that if a doctor is a gentleman the question of ethics will not arise. If

he is a gentleman he will always be and act like a gentleman, whether he practices in industry or elsewhere.

If the medical profession disapproves of the way industrial physicians are handling cases, the proper procedure is to improve the quality of the men doing industrial work. I do not think it is possible to stop industrial medicine. It is necessary in the economics of the business world. The medical profession can only guide and suggest the most ethical methods of carrying on its functions.

In closing I wish to emphasize the difference between industrial and community medicine. Community medicine is practiced where a factory dominates the community, and the industrial doctors care not only for the workmen but for their families as well. Such a condition is present in Binghamton, New York, in some of the mill towns of Massachusetts and Connecticut, and in a number of other parts of the country. In true industrial medicine no work should be done by the doctor outside of the factory in which he works except in cases involving the Workmen's Compensation Act where as an agent of the insurance company the doctor must act provided the patient does not select some other physician.

DR. BRYANT: I am very glad that Dr. Clark brought up that side of the contact of the industrial physician with the general practitioner. I think that is the relation which counts more than anything else. The medical man is interested in this and he wants to know how it affects him. We have had a delightful paper and discussion, and I will now throw the subject open to the house and ask for some quick snappy questions or discussions. I am going to ask Dr. Vose, a guest, to speak.

DR. VOSE: I am very grateful to the President for the opportunity to be present at this meeting and to listen to this most interesting paper. It is a subject in which I have been interested but I am rather diffident about referring to it because my experience in industrial medicine was "short and sweet". I, however, approach it from both sides because when in private practice I occasionally met with an insurance examiner or some corporation physician, and I must say that I always had a little feeling of antagonism, which perhaps was from oversensitiveness on my part. I know that when I took up the work as part-time physician I tried to meet the family physician half-way, and on the whole my experience was very pleasant in that respect. I found the family physician very willing to coöperate and very helpful. As Dr. Clark said, with regard to that association, the industrial physician is purely in an advisory position and really attempts to reach many of the cases which might not get to the family practitioner. In my work which was perhaps more amongst women than men it was particularly helpful because many of the women dislike to consult their family physician in those cases where early treatment is especially advisable, and I think perhaps the most satisfactory part of my experience was the ability to get people to take better care of themselves, by prompt attention which is so necessary in many cases, and thereby the lot of the industrial physician is a very happy one. In other ways it is less happy, and there are questions which arise, especially as the industrial physician is trying to justify his own position from an economic point of view, which is always difficult in dealing with labor, yet it has seemed to me that amongst the broad-minded members of the profession the idea of thus getting at the people and promoting public health progress the industrial physician is increasing his usefulness. Dr. Goldthwait told me only a very short time ago that he thought that much more of this work must be done but there is difficulty in undertaking a public health position or an advisory position under the patronage of the laity who are not familiar with the conditions involved. We reach scientific results only by a a careful follow-up of cases and carefully kept records. Those records would seem to be, according to the ethics of our profession, rather sacred; and it is distressing to have them placed in the position where they can be misused. The management of the health department should use those records for the benefit of the industry and at the same time keep them under the control of the medical profession itself in order to uphold professional ethics which are not always appreciated by the laity.

DR. PARKER: I would like to discuss this paper briefly. I am particularly interested in this subject as I have been engaged in the practice of industry many years, first, as medical director in the W. H. McElwain Company and after that was absorbed by the International Shoe Company I continued as head of the medical department. The paper and the discussions today have been very illuminating on the subject of industrial medicine, sanitary engineering, safety engineering and on the duties of the industrial surgeon himself. There is another phase of it, however, that I think has not been discussed fully, and a phase in which I think we, as an advisory body representative of the different states, should be particularly interested. Dr. Clark touched on the relation of the industrial surgeon, or of industrial surgery to the general practitioner. I think we all admit that the general practitioner or the surgeon has always felt that it was his inherent right to practice medicine in a community without any organized attempt at diversion of what he might term his families or his patients. On the other hand, industry feels, and rightly so, that it must retain the most efficient and careful super-

vision of the workmen. Industrial surgery is really preventive surgery or preventive medicine. The industrial surgeon occupies the same position, I believe, in industry that the military surgeon holds in the service, that is, to keep the most men on the firing line most of the time. I think that is something that the man who is not in industrial medicine and industrial surgery does not think of or realize. An employee of an industry when he becomes disabled or sick becomes a liability, not only to himself but to the company, and his loss to that company is in direct relation to the amount of time he loses from his work and it shows up in the balance sheet. Now, industrial surgery and medicine, as Dr. Clark has said, is something which has come here to stay and it is going to increase. How fast and how far is it going to increase? That is something I believe is entirely up to the medical profession. In industry, as we all know, the expense account is budgeted—a certain amount put up to machinery, power, care of employees, compensation or death losses, and it has to know somewhere near where it is going to get off. The large companies carry their own insurance, but a large percentage of the smaller companies pay an insurance or indemnity company to carry that. It is a purely business proposition with them; there is no philanthropy or Utopian ideas with insurance companies. Why do the insurance companies or the industries themselves wish to have a designated physician or a surgeon to take care of their workers? One reason, I believe, and this is directly up to us in the medical profession, is that when these cases go to the outside physician a certain percentage of them are exploited and the industry or the insurance company suffers. Dr. Clark spoke of community medicine, such as the Endicott-Johnson Company practises. I don't believe the Endicott-Johnson Company are philanthropists. They are probably doing it because they expect to get their men back to work sooner when sick or injured and they find that it pays on the balance sheet. I don't know as I ought to say that, but anyway they get results. There is a common ground for complaint. We must improve our treatment of industrial accidents and the health of workers in industry and also have the interests of the employer at heart all the time, and endeavor to get the workers back to work and also to give the company a square deal when the bill comes in and not try to exploit those cases that happen to be taken care of through an insurance company or by the industrial concern itself. We have got to realize that and meet it.

Dr. Birnie: I don't know how any thinking or reasonable physician can object to industrial medicine as outlined by Dr. Clark; it is only with the so-called community medicine that anyone can have a quarrel. I might speak of the way one insurance company handles the work in the Connecticut valley. Under the Massachusetts Workmen's Compensation Act the injured workman has a right to choose his own surgeon or physician. If he doesn't so elect, the insurance company if it pleases can send him into a hospital ward and the ward surgeon can collect nothing for his work. Certain large insurance companies do not like that idea. They said that they wanted as good service as could be furnished and wanted the men properly taken care of and a certain amount of coöperation or supervision in getting them well. So they picked out two surgeons connected with every hospital up and down the Connecticut valley, and they invited all those surgeons to a conference with the heads of the medical departments of this insurance company, and discussed the existing conditions. Subsequently the insurance company went back to the hospitals and instructed the officers of the hospitals that whenever a man was brought in who did not elect a surgeon, in all cases for which they were responsible, that they wanted one of those two surgeons to take charge. So up to a certain extent these surgeons are under supervision of the insurance company and yet entirely within the law, and it is a rule which nobody can object to with reason.

Dr. Luce: I would like to have this matter of ethics made a little clearer to me. I take it to be my job, if I run across a man on the street with a broken leg to give him first aid and then ask him who his physician is and give him a chance to choose. As far as industrial work goes, for some years I have been the railroad surgeon in my community. Now it is the policy of the Boston & Maine Railroad not to insist on my doing the surgical work entirely. In the event of catastrophes of which I have had two (in one of them a street car tipped over and a great many people were injured; the neighbors telephoned to the doctors and several responded); my job was not to grab those people and take them to the hospital; but to let them select those physicians whom they knew, but it was my job to see that they got good surgeons and that proper reports were submitted. That is the policy of the railroad. Dr. Clark has his factory and if I should be practising in his town and enjoying the confidence of the community, and if one of my patients in that factory is disabled or sick and Dr. Clark didn't agree to have me associated with him, I should feel that was a breach of etiquette. That would be my personal interpretation of the ethics in such cases.

Dr. Wilkins: I want to ask a question. Dr. Clark made the statement that the medical profession should exercise supervision over the industrial service, over the men doing industrial work. I do not see how that can be done. What

I have in mind is an industrial company which has selected the man who takes care of the accident and immediate surgical cases of the institution on the advice and urge of the insurance company. To my mind that is entirely wrong, because while the insurance company may have a real motive concerning the good of the individual, we would be a little suspicious that its motive might be one of economy and that the ability of the man in question might not be considered as it should be. If Dr. Clark has any suggestion by which such a condition could be prevented, I would like to hear it.

DR. CLARK: I think the whole trouble in industrial medicine at the present time centers around the insurance companies. In every discussion I have read, the complaint has been not against the industrial physician but against the insurance company and the position which the industrial physician takes in regard to the insurance company. Frankly, I do not know just how that can be improved. It seems to me it is like a great many other things; it can only be improved through education. Most of the insurance companies when they started compensation insurance knew nothing about it, as it had been in operation a very short time, but since its adoption there have been distinct advances in the steps which the insurance companies have taken to meet the questions involved. They are gradually being educated, gradually seeking the best way to manage the cases, and I believe it makes no difference to an insurance company as to whether Dr. A or Dr. B cares for a case if Dr. A is just as good as Dr. B. I think that quality of service is what they want. They want doctors to take care of their cases who can get the men back to work at the earliest possible moment and with the least possible disability. So far as calling in the doctor who is the family physician in the case of every accident is concerned, it is an extremely difficult thing to do. It is difficult particularly because most of the workmen have no doctor. Again and again, I ask men suffering with a medical or surgical condition who their physician is and they say that they haven't any, and I say, "Why haven't you?" and they say, "I don't know; I suppose you might say Doctor Blank. I called him five years ago. I don't know whether he is my family physician. I don't know whether he is practising or not." That is true with the majority of the workmen who perform the bulk of the work in industry. The main thing is that those men are anxious to get back to work with as little complication and delay as possible. They would very much rather have the industrial surgeon or physician take care of their cases than go to anyone outside. I have worked in several general hospitals, and I don't recollect any case of a man brought in with, let us say, a broken leg in which the family physician has been called in or any particular attention paid to him except when the family physician has found out about the accident and has inquired about the case. It is the rule of expediency, more or less, and nothing else. I rather deplore it. I think we are trying to do everything we can to prevent it and where we know a doctor is interested, we try to have him informed that a man has had an accident or has a sickness, and we like to get him in on the case. Practically, it is much more difficult than it sounds. The severer cases go to the hospitals and usually are cared for by the general staffs of the hospitals and, as another speaker said, in the majority of cases the insurance company would rather pay a doctor they know who does the job than to have the patient make his selection. Naturally the insurance company likes to have a case assigned to someone they know something about. So far as the workman is concerned, he is pretty well satisfied with things as they are.

DR. DAVIS: I am glad the distinction between industrial medicine and community medicine has been so sharply drawn. I had planned to ask the question of the representatives of the industries present whether they thought industry itself, or the medical men now engaged in industrial medicine, need the help of a body such as this, or the help of the profession, in the matter of some control or check on the personnel and qualifications of the medical men doing this work, or whether economic forces, and the realization of our big industrial concerns that the best is none too good for them is, sufficient. Some of us deplore the passing of control in many localities of our hospital situation into lay hands and in some respects this may be a similar matter. Whether or not we are deeply interested, there certainly should be a closer check of the personnel and activities of those engaged in industrial medicine. I agree that we have no quarrel with industrial medicine as it has been set forth here by the speakers.

DR. BRYANT: I will now call upon Dr. Stevens to close the discussion.

DR. STEVENS: I think there is just one point I would like to add; possibly a reiteration. Perhaps I did not make perfectly clear my feeling that there is a very real distinction between what you might call etiquette and ethics. Of course etiquette or the observing of the rules of behavior is a characteristic of the gentleman in any situation where he may find himself. To me ethics is a more fundamental question of principles. The point I would like to emphasize is this: the ethics of this matter is not so much a question of my behavior as an industrial physician toward someone else as a private practitioner; that should be taken care of by the common rules of conduct among well-bred physicians. It is the question of keeping the faith of my relation to the individual who is my patient; and there is the great difficulty as

I have seen it in my experience as an industrial physician. The individual that comes to me as a patient forgets for the time being whether he is a member of my church, or a member of my fraternity, or working in the same plant where I happen to be. He comes to me as a patient to a physician. It may be that the thing which starts his relation with me is an industrial accident or disease in which I can in strict accord with all etiquette and ethics give him first aid and start him in the right direction to have his trouble further cared for. But the difficulty into which the physician frequently falls is in deciding where he should drop the personal problem brought to him by an industrial worker as a patient because if he pursues it along the natural course of his relation with that individual as patient he often finds he is getting into things as a physician which are exceedingly embarrassing to him as an official of an industry. There is the crux of the whole matter. I could go into any number of cases in which this sort of problem comes to the industrial physician; for we cannot yet define things and draw a line and say: "This is industrial; and this is social or community medicine." I agree perfectly with the proposition that it is dangerous for the industrial physician to get into community medicine; but that is a danger to which, it seems to me, every industrial physician is at present subject. I think that the place where this Council can be of most help to industrial medicine will be in working out some sort of a system of practice under which the industrial physician can be more confident in setting the proper bounds to his activities; and confident that within those bounds he can count upon the preservation of his personal relations with his industrial patients.

Upon motion by Dr. Parker, duly seconded, it was

Voted: That a committee be appointed by the President to consider this discussion and report at the next meeting.

Reading of report by Dr. John M. Birnie.

REPORT OF THE COMMITTEE APPOINTED BY THE PRESIDENT TO CONSIDER MATTERS PRESENTED AT THE MEETING OF THE NEW ENGLAND MEDICAL COUNCIL FEBRUARY 19, 1930 AND REPORT THEREON*

SOME correspondence between the members of your committee, appointed to consider the subjects presented at the last meeting of the Council, shows that there is considerable unanimity of opinion although it is variously expressed. We can do no better than present to you the critique as written by Doctor Greenough:

*At the meeting of the New England Medical Council in Boston, September 25, 1930, it was voted that this report be sent forthwith to all members of the Council and to the President and Secretary of each of the New England State Medical Societies.

The report of the last meeting of the New England Medical Council deals with several different subjects, as follows:

(1) Information was given of the progress of the work of the Committee on Costs of Medical Care. No action on this subject seems necessary.

(2) The discussion of the possible organization of a Springfield Medical School must await some move on the part of Dartmouth College. No action is necessary.

(3) Remarks of Dr. Ober having to do with the organization of courses in the Harvard Medical School for the education of specialists qualified to practice their specialty. This does not require further action. The suggestion in this connection, viz., that the standard set up by the American College of Surgeons should be supported in preference to the attempt to indicate qualifications for the practice of specialties by higher university degrees, was not supported by any action.

The remainder of the meeting was devoted to consideration of the relations of clinics and health associations to the medical profession. A number of important suggestions were made by Dr. Lee, Dr. Richardson, Dr. Bigelow and Dr. Blumer. With these communications in mind it would seem possible for the New England Medical Council to prepare a statement as a definition of policy which could be discussed, and, if desired, carried back to the component State societies for further discussion and such action as may be desired. A statement of this nature could be made as follows:

The Council recognizes the fact that the development of lay health agencies, industrial health projects, the increase of the activities of federal, state and city Health Departments, and the rapid advances in medical science, have all contributed to introduce problems in regard to the relation of the general practitioner to his patients and to these other health activities, which demand solution. In attempting a solution of these problems it must be remembered that the physician is bound by the code of ethics of his profession, and that this code must be maintained inviolate. These conditions, insofar as they affect the relation of patient and physician, should be made applicable equally to all institutional, governmental and lay health organizations. Under these circumstances the following general principles may be set up:

(1) Special clinics now exist in many places for the diagnosis and treatment of tuberculosis, cancer, diabetes, heart disease, arthritis, maternity, pre-natal clinics, baby hygiene, asthma, etc. Clinics of this nature should function as consultation clinics only. Patients should be referred to these clinics by their own physicians. They should receive diag-

nosis and any special treatment required, and should then be returned to the physician with information as to what has been done, advice as to further treatment, and the coöperation of the physician should be secured in any subsequent follow-up.

(2) Free patients' clinics should be conducted only for indigent patients and a careful social service survey, as now practiced in many of our metropolitan hospitals, should be made before admission. In the rural districts the further development of hospital centres offers the most economical and effective way of carrying this service to the smaller towns.

(3) Part-pay clinics for patients of moderate means should be conducted like the special clinics, on a consultation basis. Such patients should be referred by their own physicians and should be returned with a report on the diagnosis and the treatment given, and with suggestions for further care and for follow-up.

(4) At the present time the general practitioner finds that the most serious obstacle, which prevents his giving to his patients the best service of which modern medicine is capable, is the lack of facilities for laboratory examination. Some provision should be made through the hospitals (aided, if necessary, by the State and Municipal Departments of Public Health) by which laboratory examinations of urine, blood, stools, blood chemistry, pathology, serum reactions, x-ray, cystoscopy, and so on, should be made available at cost, or, in suitable cases, free of all expense, on the request of the general practitioner. This would enable him not only to take an interest in, and make satisfactory examinations of patients in apparent health, but should be available to him in the case of indigent patients when necessary in the treatment of disease (this recommendation is a sweeping one and is, frankly, open to discussion).

(5) Industrial medical practice and workmen's compensation. Many difficulties appear to develop as a result of the practice of employing physicians in industrial organizations. For the study of the diseases peculiar to the industry, and for first-aid work, this practice cannot be criticised. With these exceptions, however, it is believed that physicians employed by industrial concerns should restrict themselves to consultation service, and should refer patients to their own physicians for treatment. The study of this aspect of medical practice must be carried further, and a definite recommendation at this time cannot be made.

JOHN M. BIRNIE,
Chairman.

DR. SULLIVAN: I move that this report be accepted and the Secretary directed to send a copy of it to every member of this Council and to the officers of the different State societies and that it have a prominent place in the publication of the *Journal* at a near date.

Motion seconded.

Upon a question by the Secretary as to whether the report should be sent as a reprint of the publication, or in the report of the meeting which will be sent to each member and to the officers of the State societies, Dr. Sullivan said:

I would rather it be made a definite, specific thing in addition of course to any printed report that is sent out of this meeting and made as emphatic as possible to the members of this Council and to the officers of the State societies that this action was adopted today. I think it is important to make it a special matter, and I would like to have this action transmitted without delay to the persons specified in the motion. I feel that the subject is entitled to that consideration.

A vote being taken, the motion was declared carried.

DR. YOUNG: Do I understand that the full discussion that we have had today will go along with this report? My point is that if I were to discuss this at home with our own groups I would hate to have them see this one committee report without having had an opportunity to read Dr Stevens' paper and the other discussions of today because they are so intimately connected.

DR. BRYANT: It refers to just that one report of Dr. Birnie.

DR. YOUNG: And along with that this full report will go?

DR. BOWERS: We can get out this particular report within a very short time but with the discussions there is a great deal of delay before they can be published.

DR. BRYANT: This whole subject of Dr. Birnie's paper and everything connected with the last meeting is now open for discussion.

DR. PARKER: At the beginning of the meeting a communication from the President to the Executive Committee was read in relation to the amalgamation of the separate lay organizations into one State Public Health Association as has been carried out in Maine. The recommendations incorporated in this seem very tangible and practical for any State in New England to carry out. The details as existing in Maine might not be applicable to the other States, but the basic idea it seems to me was good and it might be worth while to send a copy of this communication to the officers of the several State societies, with or without recommendation, for its adoption. I would like a little discussion on that.

At the last meeting of the Medical Society of New Hampshire the recommendation of this communication was adopted and a representative committee appointed to make an effort to amalgamate our State health organizations and clinics into one body which could be advised, if not controlled, by the State society. I think it is entirely worth while.

DR. BRYANT: The chief object was not so much what Dr. Parker has suggested, as how to get this back into your State societies and what parties should receive the recommendations and carry out the work. In this plan it was the idea to form committees of public relations both in the State Associations and in the County Societies to take the recommendations which come back from the New England Medical Council and so far as possible apply them in the State Associations and County Societies. It is all very well to come here and have papers and have them discussed, but to get the matter before the members of your State Associations and your County Societies and get them working, I think is the crux of the whole thing in the value of this Council.

DR. ROBERT B. GREENOUGH: I would like to say that I yield to no one in my admiration for the Public Health Association of the State of Maine. They are very fortunate in that state to be able to organize all of their public health activities under the aegis of the medical profession. Conditions differ, however, in different states, and it is not always possible to work out these things in the same way everywhere. I do not think that we can do it in the same way in Massachusetts, although I believe the Maine plan is an ideal one where it can be adopted.

Dr. Bryant's recommendation for the establishment of a committee of public relations in each state, with sub-committees in each county or district, is a sweeping one. In Massachusetts we have a strong Committee on Public Health of the State Medical Society, and I believe that Dr. Bryant's report should be referred to this committee with a recommendation that they consider its various items and report back to the Council of the Massachusetts Medical Society. The appointment of sub-committees in each district is well within the bounds of possibility. In Massachusetts we are about to appoint a subcommittee of the Committee of Public Health to deal particularly with the question of public health education. The American Medical Association has appointed such a committee and they assume full responsibility for publications in the lay press, and especially for radio broadcasts on medical subjects, in the name of the association.

There is no question that public education in medical matters is one of the important functions of the medical profession as a whole. When this can be carried out by the full time physicians who are connected with the public health departments of the states and cities no difficulties can arise, but when individual physicians who are in active practice are called upon to give this instruction under their own names they subject themselves to the criticism of unethical advertising. The appointment of a committee to assume responsibility for these activities in the name of the State thus protects the individual from criticism on this score. I believe that this is the best available solution of the difficulty.

DR. PARKER: I would like to make a motion that that communication of the President which was read and discussed by Dr. Greenough be transmitted to the officers of the several States societies.

DR. BRYANT: It will be incorporated in the records of this meeting and will be sent as a part of the proceedings anyway.

DR. BLUMER: Might it not add to the force of that suggestion if the Council endorsed the general principle and sent it to the members of the Council and officers of the State societies as endorsed, but leaving the details to be worked out by the several state societies?

DR. BRYANT: This has been endorsed by the Executive Committee. Here in Massachusetts you have a committee which could very readily handle this as Dr. Greenough suggests; it will be very simple for the State of Maine, and in all probability in the other States you have similar committees to which this plan could be referred.

On motion, duly seconded, it was

Voted: To leave to the Executive Committee the matter of the program for the next meeting.

Voted: That the Secretary be instructed to send to Dr. Ricker the sympathy of this body.

Voted: To adjourn.

Adjourned at 3.25 P. M.

Note. The secretary forwarded the reports of Dr. Birnie's committee and of the President as directed in the votes.

CASE RECORDS
of the
MASSACHUSETTS GENERAL HOSPITAL

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN WEEKLY CLINICAL-PATHOLOGIC EXERCISES

EDITED BY RICHARD C. CABOT, M.D.
F. M. PAINTER, A.B., ASSISTANT EDITOR

CASE 16461

HEMATURIA

MEDICAL DEPARTMENT

An English-American, twenty-one years old, a plumber's apprentice, entered April 12 comatose. The history was given by his parents.

February 13 he had pleural pneumonia lasting three weeks. After this he was up and about for a week. He then began to have hematuria and severe aching pain in the small of the back, chiefly on the right side. He had difficulty in starting the urinary stream and slight burning with micturition. After going to bed he had profuse sweating. Two weeks before admission he suddenly had three convulsions. He then seemed to be improving, but the urine remained bloody until the past four days, when it had been clear. During the past week he had had constant vomiting. He had passed three pints of urine daily. He had had some dizziness and mental cloudiness. He had had no headache or anuria at any time. The morning of admission, on being told he was coming to the hospital, he was much disturbed and had a convulsion followed by two others, one in the ambulance.

Clinical examination showed a well nourished young man, comatose, resistive, groaning frequently, breathing through his mouth. His breath was ammoniacal. The mucous membranes were slightly pale. The skin was blotchy, over the shoulders and chest and dorsum of the feet very pale, with pitting edema. Elsewhere the color of the skin was fair. The eyes were not examined because he kept them tight shut. The mouth was open, with blood streaked mucus about the lips and teeth. The left eye tooth was missing and the gum looked as if the tooth had been recently extracted. The throat could not be seen. The heart was not enlarged. The rhythm was regular. The sounds were of good quality. There was a rough systolic murmur, loudest over the apex, heard all over the precordia and into the axilla. The aortic second sound was sharp and ringing. The pulses were normal. The blood pressure was 195/110 to 160/100. There were dullness and bronchial breathing throughout the entire right back. The abdomen showed generalized spasm. No masses were felt. The knee jerks and ankle jerks were absent and there was bilateral ankle clonus, not sustained.

The urine was normal in amount on the two occasions recorded, cloudy at one of two examinations, reddish at the other, specific gravity 1.014 to 1.016, a large trace of albumin at both examinations, 4 to 10 leukocytes per high power field at both, 12 red cells per field at one, sediment loaded with red cells at the other, bacteria at both. Blood: 13,000 to 14,500 leukocytes, hemoglobin 55 per cent, reds 2,570,000 to 2,100,000, 91 per cent polynuclears, slight achromia, slight variation in size, platelets slightly increased. Renal function and Hinton not recorded.

Temperature 99.9° to 96.3°. Pulse 100 to 70. Respirations 23 to 8. (Morphia.)

Roentgenological examination showed mottled dullness throughout the entire right lung. It did not obscure the outline of the heart, diaphragm, or ribs. The diaphragm was in the usual position, sharp in outline. The left lung was clear. The heart was not displaced.

The afternoon of admission the patient had seven convulsions in an hour and a half. After that he had none, and in the evening was quiet. He would take no fluids by mouth and did not retain rectal tap water. He voided involuntarily from time to time in the evening. At nine o'clock a thousand cubic centimeters of normal saline was given subcutaneously.

April 14 the visiting physician notes: "Neck not stiff, glands not enlarged. Pupils equal, react to light and are not small. Heart in the fifth space, nipple line, regular, sounds of good quality. A rough systolic murmur in the left second interspace. Lungs symmetrical; patch in the right is restricted. Dullness at the right base in front with diminished breathing and râles. Dullness all over the right back, most marked below the angle of the scapula. Numerous râles and diminished breathing at the right base. No bronchial breathing. Râles also at the extreme left base. No egophony on the right side. Abdomen a little full, possible distention. A little spasm on the right side of the abdomen."

April 18 the patient died.

CLINICAL DISCUSSION

BY RICHARD C. CABOT, M.D.

NOTES ON THE HISTORY

I think that is an interesting bit of history, his having a convulsion on being told he was coming to the hospital. We are apt to draw a very sharp line between organic and functional convulsions. When a convulsion seems to be brought on by physical strain like the worry of going to the hospital we say it is hysteria. But I do not for a moment believe this was due to hysteria alone.

Taking the history so far we certainly expect advanced nephritis. Nothing that he has

there is against it. It is rather unusual that he had difficulty in starting the stream. That makes us think of bladder disease. He may have both.

NOTES ON THE PHYSICAL EXAMINATION

When we have signs of dullness and bronchial breathing we want to know more. What about tactile fremitus, which might have helped us in distinguishing fluid from solid?

In a person who has had recent convulsions, generalized abdominal spasm is not significant.

The absent knee jerks and ankle jerks and bilateral ankle clonus, not sustained, can be put down to the condition of the nervous system, perhaps due to uremia.

There were only two urine examinations, therefore we cannot say there is evidence of fixed gravity.

The mottled dullness by roentgenological examination could not be fluid in the chest. It must be solid, pneumonia.

The neck was not stiff; we have no evidence of meningitis.

DIFFERENTIAL DIAGNOSIS

I do not see how we can have any doubt in regard to nephritis. That is the underlying certain fact; then we look for complications. What kind of nephritis? At his age presumably glomerular nephritis. Did he also have a stone or other non-nephritic lesion? I do not see that we have evidence of it. He did once have pain in the back. Nothing more was said about that later. He did have plenty of other symptoms which could not be explained by stone. We hesitate to say that he had two separate things, stone and nephritis. His anemia, quite marked secondary anemia, can be accounted for by hemorrhage and possibly by nephritis, which may have been going on longer than the symptoms. It is probably not merely a chronic process, but an acute exacerbation of a chronic process.

Will he be shown to have an enlarged heart? I think there is a good chance that he will, although the physical examination does not show it. How long the hypertension has been going on I do not know, but it is quite probable that it has been going on long enough to produce hypertrophy.

In the right lung we ought to expect bronchopneumonia. I do not think there is good evidence of anything else. That would account for the rise in polynuclear cells and the slight rise in leukocytes. Why did he have no more fever? I can only say that possibly he was so weakened by nephritis, so profoundly intoxicated before death that he did not have reactive power enough to raise the temperature or even the leukocytes much.

A STUDENT: Is there any possibility of tuberculosis?

DR. CABOT: The question of tuberculosis was not raised. I think we have pretty good evidence against it. The signs do not seem to be at the apices. They seem to be largely unilateral. Tuberculosis giving such advanced signs as these is usually bilateral. He has had very little cough and nothing has been said about sputum. We certainly could not explain everything on the basis of tuberculosis, and we have to make a good general diagnosis. It is a good rule to make as few diagnoses as we can. As bronchopneumonia is the chief terminal infection it seems better to say that than tuberculosis.

A STUDENT: What possibility is there of an infection of the kidney,—pyelonephritis?

DR. CABOT: We do not get infection of the kidney without fever. We do not often get it at his age. Infection of the kidney does not cause hematuria ordinarily. It certainly does not cause convulsions such as he had, or high blood pressure. We are safe in ruling it out.

A STUDENT: Would you not expect mitral stenosis from the history?

DR. CABOT: No. I do not expect any cardiac lesion. There is a systolic murmur there which we get with almost any bad secondary anemia and which we get with most cases of hypertension. With two plausible explanations we do not need to suppose anything more.

A STUDENT: Does lead poisoning ever hit the kidney?

DR. CABOT: His occupation of course brings that to your mind. We do not know how much plumbers' apprentices use lead—I suppose as much as plumbers do. Those cases of nephritis most generally connected with lead are usually more chronic than this. They seem to occur in older people. Yet I cannot rule out lead as a factor in the etiology.

A STUDENT: Do you mean that probably he had nephritis before the so-called pleural pneumonia?

DR. CABOT: The history of nephritis as one goes back over the whole case is generally of a long period latent, underground, with no symptoms. Then some symptoms come up. In life insurance cases, cases covering a long period, one discovers nephritis in people with no symptoms, feeling nothing at all; then towards the end symptoms like these.

A STUDENT: Does profuse sweating in bed always accompany this?

DR. CABOT: It does not; but sweating often goes with convulsions. I do not know what else could account for it, unless he already had begun to have bronchopneumonia.

A STUDENT: What about the bacteria in the urine?

DR. CABOT: I do not know why they were found in the urine.

DR. MALLORY: I wonder how long it had stood on the laboratory desk.

CLINICAL DIAGNOSES

Acute nephritis.
Uremia.

DR. RICHARD C. CABOT'S DIAGNOSES

Chronic glomerular nephritis with acute exacerbation.
Hypertrophy and dilatation of the heart.
Bronchopneumonia.

ANATOMIC DIAGNOSIS

Chronic and acute glomerular nephritis.

Pathologic Discussion

DR. TRACY B. MALLORY: We were limited at autopsy to examination of the abdominal cavity and pelvis. We did find marked nephritis. The kidneys were enlarged, weighing 575 grams, nearly twice the normal size. The capsules stripped readily, leaving a hemorrhagic surface. Microscopically there was evidence of marked glomerular nephritis. As Dr. Cabot suspected, that was undoubtedly present a good many months more than the history indicated. The total story was about two months. The number and degree of sclerosed glomeruli would indicate at least a year's duration. There was unquestionably an acute, more recent process which was perhaps connected in some way with recent infection. It is rare, at least uncommon, to find nephritis subsequent to ordinary pneumonia. So far as we know the great majority of glomerulonephritides follow streptococcus infections, and only streptococcus pneumonias are very apt to give rise to nephritis.

As I said, I do not believe the bacteria found in the smears of the urine mean anything. There is often a very much larger number of bacteria in a specimen that is allowed to stand overnight than in specimens examined promptly.

DR. CABOT: You did not get a chance to see the lungs?

DR. MALLORY: No.

DR. CABOT: Anyone who likes can believe that he had tuberculosis. I do not.

ORDERS

April 12. Force fluids: 3000 cubic centimeters daily. Soft solid diet, proteins about 40 grams, low salt. Magnesium sulphate half an ounce every other day to get two or three loose stools. Sweat bath for half an hour every other day. Morphia grain one-eighth s.c. for convulsions or extreme restlessness every four hours. Rectal tap water if possible six ounces every hour.

April 13. Rectal tap water six ounces every hour and a half. Magnesium sulphate half an ounce in orange juice immediately. Sweat bath.

The remaining orders for morphia are one-eighth to one-sixth grain doses once a day to p.r.n.

April 14. Luminal grains iss if necessary. (Not given.)

April 15. Paraldehyde drams ii by rectum, repeat once if necessary. (Given at one and five a. m. Order repeated at 8:50 p. m.) Luminal grain iss if necessary by mouth. (Order repeated in the evening.) Soapsuds enema. Magnesium sulphate one ounce. Sweat bath.

April 16. Paraldehyde two ounces by rectum; to be repeated once if necessary. Luminal grains iss.

April 17. Urotropin grains viiss t.i.d. No more magnesium sulphate until April 19; starting then magnesium sulphate half an ounce every other day to maintain loose stools. Luminal grains iss and paraldehyde two ounces, to be repeated twice for restlessness.

NOTES ON THE TREATMENT BY DR. CABOT

Forcing fluids in nephritis is a common form of therapy, although it does not rest, I think, on very good scientific foundation. Von Noorden has shown that in some cases of nephritis water is the most difficult substance for the kidney to excrete. On the other hand, empirical observation seems to show that in some cases large amounts of water may assist the action of the kidney or at any rate dilute the toxins in the blood.

The low protein diet is given here with the idea not of stimulating but of sparing the kidney. This is much more reasonable in acute than in chronic nephritis, though I do not think it has a very solid basis in either. The low salt diet is given, of course, in the hope of decreasing or preventing edema. Magnesium sulphate and sweating are time-honored procedures which I suppose have a certain amount of empirical support as beneficial in uremia. It has not been shown, I think, that they take anything except water out of the body, and if this is true it would seem that they might easily do harm by concentrating the toxins in the blood, although of course they would tend to decrease edema and might do more good in this way than they would harm in any other.

The other orders, I think, explain themselves.

CASE 16462

ENLARGED CERVICAL GLANDS

MEDICAL DEPARTMENT

A Greek barber thirty-seven years old entered March 27 complaining of pain and swelling of the neck of a year's duration and weakness. He had some language difficulty, so that the history may not be entirely reliable.

The pain and swelling began when he was

feeling well. The swelling became very large. After two months' medical and x-ray treatment the swelling came down and remained down until six months before admission. Then the left side, later the right, began to swell again. About the same time he began to have abdominal pain and swelling. Radiation relieved this somewhat. He still had a little pain. Since the onset he had had increasing weakness. For the past five weeks he had been in bed. Since the onset his appetite had grown increasingly poor and his weight had fallen from 135 pounds a year ago to 120.

His father died of shock. One of the patient's children died soon after birth.

He had always been very healthy. This was his first illness.

Clinical examination showed a poorly nourished, thin, pale, rather distressed looking man lying in bed in no acute discomfort. The mucous membranes were pale. The skin over the neck and abdomen were deeply bronzed. In the mucous membrane of the throat over each tonsil was a slightly raised pale yellow area of tissue, not exudate, measuring 1.5 by 2 centimeters. The one on the right side showed the appearance of an ulcer in the center. There was general adenopathy. The glands of the neck were in chains, firm, discrete, not tender or adherent, the size of peas to the size of olives. There was the scar of an old biopsy over the right sternomastoid muscle. The abdomen was flat, with a small superficial cigarette sized mass in the epigastrium, firm, not tender, descending with respiration. To the left of the umbilicus was a rounded, smooth, tender, aching mass, firm, not adherent, with a questionable notch opposite the umbilicus. This mass moved readily with respiration. The upper border was indefinite. It was thought to be the spleen, though it might have been glands.

The amount of urine is not recorded. The urine showed a slight to a very slight trace of albumin at two of eight examinations, sugar at three, bile once, diacetic acid once, rare leukocytes to 5 ± per field at four, occasional hyalin casts at four, occasional granular casts at three, specific gravity 1.033 to 1.020. The blood showed hemoglobin 30 to 40 per cent, 2,050 to 5,400 leukocytes, 3,270,000 to 2,670,000 reds, 88 to 89 per cent polynuclears. Two smears showed achromia, some anisocytosis, no poikilocytosis, platelets decreased. Two Hintons and one Wassermann test were weakly positive. One Wassermann was negative. The non-protein nitrogen was 58 milligrams. The stools were light yellow at one of two examinations, clay colored at the other.

The temperature was 98° to 103.6°, the pulse 95 to 140; both showed wide daily swinging. The respirations were 20 to 32.

X-ray showed the respiratory movements of the diaphragm to be somewhat limited. The costophrenic sinuses were clear. There was mottled dullness in the upper portion of the lung fields, more extensive on the left than on the right. On the left it extended well into the apex. The lung markings running to the apex were thickened and beaded. The hilus shadows were moderately increased in size. A few calcified glands were present. The shadows of the heart and great vessels appeared normal. There was no evidence of mediastinal tumor.

The patient was in bed almost constantly, very weak. The dull abdominal ache continued. March 31 a lung consultant found slight dullness and râles after cough and other signs in the right upper back, harsh breathing in the left upper back without other signs. April 5 he vomited large amounts of dark green liquid. There was epigastric soreness and dull pain. The stomach was distended. Its outline was visible. There was marked visible peristalsis. The pulse was more rapid and weaker. The stomach was washed out. 2000 cubic centimeters of two and a half per cent glucose and normal saline were given subcutaneously into the thighs. The patient was more comfortable and slept, but the condition was too poor to warrant further attempts at x-ray therapy. April 6 he was better, and on a first-stage gastric diet did not vomit. The glucose and saline clysis was repeated. He had no pain. April 7 small doses of deep x-ray therapy were advised and begun. April 12 he was comfortable but very weak. The mass of midabdominal glands had decreased almost half in size. April 18 obstruction threatened again and the abdominal masses were larger if anything. Six or seven hundred cubic centimeters of yellow-brown thick material giving a positive guaiac was pumped out of the stomach. The patient was chilly and sweating. The abdomen was slightly distended. That night he seemed in less distress. The next morning he became clammy and pulseless and died, not the death of obstruction.

Clinical Discussion

BY RICHARD C. CABOT, M.D.

NOTES ON THE HISTORY

Pain and swelling in the neck with a duration of a year in a man of thirty-seven suggest in the first place lymphoma, in the second tuberculosis of the cervical glands. The glands may also be due to syphilis or metastatic deposits from some internal tumor. Any of these conditions may be associated with weakness, so that the coexistence of this symptom does not help us. The fact that he had x-ray treatment for this difficulty makes us suspect lymphoma as the diagnosis, as x-ray is not often used for any of the other diseases mentioned. I see no other clues in the patient's history prior to the physical examination. The best guess so far is lymphoma.

NOTES ON THE PHYSICAL EXAMINATION

When we learn that the skin over the neck and abdomen was deeply bronzed we need also to be informed whether this discoloration followed x-ray therapy.

The area of pale yellow tissue on each tonsil is specifically stated not to be exudate, but what it was I cannot guess, nor can I explain the cause of the ulceration on the right tonsil. As far as I know it might be chancre, malignant disease or acute inflammation.

The glands in the neck as described sound like lymphoma, not tuberculosis, but might well be syphilitic.

The mass described in the epigastrium is not characteristic of any lesion that I know. That to the left of the umbilicus sounds like a spleen, though its connection with the normal or enlarged splenic dullness does not seem to be proved. Evidently the examiner thought it was a mass of lymphomatous tissue.

The urine shows nothing abnormal.

The blood shows a marked secondary anemia with a leukopenia. The blood shows no good evidence of syphilis, and the slight increase of non-protein nitrogen is not enough in the absence of important changes in the urine to make us consider nephritis seriously.

The wide daily swings of temperature and pulse would fit well with the diagnosis of lymphoma or of tuberculosis, less well with a diagnosis of other neoplasms or of syphilis.

The x-ray examination gives good evidence of disease in the upper part of both lungs, and is much more characteristic of tuberculosis than of neoplasm or of bronchopneumonia.

The well marked visible peristalsis suggests chronic intestinal obstruction unless the patient was emaciated, as he well may have been.

The signs found by the lung consultant on March 31 are much more suggestive of tuberculosis than of any other lesion.

DIFFERENTIAL DIAGNOSIS

Lymphoma and tuberculosis are the alternatives chiefly to be considered. In favor of lymphoma are the apparent improvement under x-ray therapy and the condition of the abdominal glands, if they are glands, as on the whole I suppose they are. In favor of tuberculosis is the condition found by the lung consultant in the lungs and the x-ray picture of the lungs. We are told nothing about sputum or examinations for tubercle bacilli. If these examinations were made and were negative they constitute an important piece of evidence against tuberculosis. We are not told much about the stomach. Apparently no barium examination was made. Yet on two occasions there was evidence of pyloric obstruction. My best guess is that this obstruction was due to glands outside the stomach. It is of course possible that the patient had both tuberculosis and lymphoma, the former being most evident in the lungs. Syphilis it seems to me can be excluded. Tuberculosis in an advanced stage would be likely to raise the leukocyte count. On the whole the most probable diagnosis seems to be multiple lymphomatous tumors.

BACTERIOLOGIC REPORT

Two specimens of sputum were loaded with tubercle bacilli.

PATHOLOGIC REPORT

Examination of glands removed from the neck for biopsy showed lymphoblastoma.

INTERPRETATION OF X-RAY EXAMINATION

The appearance in the chest is that of tuberculosis.

CLINICAL DIAGNOSES

Hodgkin's disease.
Pulmonary tuberculosis.

DR. RICHARD C. CABOT'S DIAGNOSIS

Multiple lymphomatous tumors.

ANATOMIC DIAGNOSES

1. *Primary fatal diseases.*

Lymphoblastoma, Hodgkin's type.
Pulmonary tuberculosis.

2. *Secondary or terminal lesions.*

Tuberculous ulcers of the small intestine with perforation and general peritonitis.

PATHOLOGIC DISCUSSION

BY TRACY B. MALLORY, M.D.

The autopsy showed both tuberculosis and Hodgkin's disease, the lesions of each being widely scattered throughout the body. The chief tuberculous lesions were an acute process at the apex of the left lung with cavity formation, numerous tuberculous ulcers of the small intestine and cecum, and also enlarged mesenteric lymph nodes. We also found nodules of Hodgkin's disease in the lungs, in the intestines, and in the mesenteric lymph nodes. Sometimes the lesions could be distinguished in gross. More often it was impossible to say whether they were tuberculous or lymphomatous.

Microscopic examination readily explained this difficulty, since the two types of lesions were found so thoroughly mixed that a single microscopic field would often show both types of disease. The large mass which had been felt in the left upper quadrant was in all probability not the spleen, which was very slightly enlarged, but a huge mass of mesenteric lymph nodes. One of the ulcers in the small intestine

had perforated and there was a slight terminal purulent peritonitis. The coexistence of tuberculosis and lymphoblastoma, especially of the Hodgkin's type, is well recognized, and has frequently led to the claim that Hodgkin's disease is due to the tubercle bacillus. The evidence for this has never been convincing. In such a case as this, where typical histologic tuberculosis is present, tubercle bacilli are easily demonstrated, as they were in our sections of this case. Where there is no histologic evidence of tuberculosis the most careful and histologic cultural examinations and also controlled animal inoculations have in the hands of most investigators proved entirely negative.

The case also raises an important therapeutic question. X-ray therapy has occasionally been used with success upon tuberculous lesions; but the type of treatment used under such conditions is entirely different from that used in treating lymphoma. Unquestionably, excessive exposure to x-ray can light up a tuberculous process, and I think it is entirely probable that this case may be so interpreted. The x-ray treatment probably improved the lymphomatous lesions and almost as certainly had a bad influence upon the tuberculosis. It is quite possible that the patient's life may have been shortened rather than lengthened by the treatment initiated following the perfectly correct diagnosis of Hodgkin's disease made upon the original biopsy.

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CURRENT MEDICAL PROBLEMS

Two fundamentally important studies are under way—studies in which, bearing as they do on the sociology of medical practice, we all cannot fail to be intensely interested. They are, of course, the five-year program of the Committee on the Costs of Medical Care and the program of the Commission on Medical Education. It is inevitable that the two, in many of their phases, should tie in closely together.

Dr. W. C. Rappleye, Director of Study of the Commission on Medical Education, has developed an idea of some of the problems which must be met, in a series of three addresses published this year. (Current Problems of Medical Education, *J. A. M. A.*, March 29, 1930; Some Problems of Medical Service, Ohio State Medical Association, May 13-15, 1930; Some Medical Problems Ahead, Commencement Address, Cornell University Medical School, June 12, 1930.)

The greatest problem confronting the medical profession at the present time is that of securing a proper distribution of medical knowledge to the entire population at a reasonable cost. This, of course, is one of the main theses of the Committee on the Costs of Medical Care, and that it concerns medical education will be recognized on realization of the fact that although not more than 15 or 20 per cent. of patients actually require the services of a specialist, about 40 per cent. of recent graduates enter the specialties, usually without adequate preparation.

The actual cost of medical care, onerous as it frequently is, and largely on account of its unequal distribution, does not nevertheless present an abnormally large bill in the aggregate, as compared to other bills. The annual cost of all forms of medical service is approximately 3 per cent. of our national income. The amount spent each year for tobacco, however, is more than twice the total income of all the physicians in the country. More is spent on candy than on the maintenance of all our hospitals. The amount spent on cosmetics and jewelry is much greater than that spent for nurses. The public buys what it is taught to buy through advertising which costs a billion and a half dollars a year—advertising which is ultimately paid for by the consumer. The essentials of medical care, it will be seen, suffer sadly in competition with the expensive non-essentials of existence.

The cost of medical care can still be reduced. Over-specialization is unnecessary and costly to the public, particularly where self-diagnosis and selection of specialists is practised by the patient. Many diseases are preventable. The distribution of physicians is seriously defective. Hospital centers, clinics, home nursing and modern facilities for transportation will find a sound solution of the problems of distribution if we do not resort to programs that are too artificial.

Certain general principles, according to Dr. Rappleye, deserve emphasis. Among the most important is that of the prevention of disease; the vested interest of the medical profession must be shifted from ill health to good health.

Basic medical service should be provided for the entire community, not alone for the small proportion which is under treatment.

The profession itself should be organized. Specialism is an essential part of moderate medical service, but it is the responsibility of the medical profession to guarantee to the public that those who claim to be specialists are, in fact, experts in their field.

The education of physicians who are in practice should be continued in order that both general practitioners and specialists may keep abreast of current knowledge.

SOURCES OF MEDICAL HISTORY

FOR many years a movement has been on foot, in this country and elsewhere, to track down the important contributions made by physicians of the past to our knowledge of medicine in general. This effort received its greatest stimulus

from the late Sir William Osler, who began collecting a library, many years ago, in which he sought for examples of the original descriptions of diseases throughout the ages, as well as important contributions to the advancement of general medical and scientific thought. These contributions, placed in chronological order, form the *Bibliotheca Prima* of his library[1]. Efforts along similar, although not so extensive lines, have been made by many other modern physicians; for instance, in the *British Journal of Surgery,* for the last few years, there have appeared a series of articles from the pen of Sir D'Arcy Power on operations and surgical procedures, usually connected with men's names. This effort is the beginning of an eponymical history of medicine, which has been extended by others to the different branches of medicine and surgery. In addition, there are various selected readings on certain subjects, one of which, on pathology, was published in this country last year, written by Dr. E. R. Long[2].

A similar book, taking as its basis physiology, and somewhat more extensive in scope, is that recently edited by Professor John F. Fulton of Yale University[3]. This volume contains selected passages from the works of authors who have exerted the greatest influence upon the development of physiological thought. The selections are brief but adequate and, in addition, Professor Fulton has written a biographical note regarding each author, which is appended to the selection. A large number of illustrations—often the title pages of the original dissertation, a photograph of the author, or the reproduction of a table or piece of apparatus from the original work—add greatly to the value of the book. Exact references, moreover, to the editions, their place of issue and important points in regard to the changes in subsequent editions of the same work have all been noted. The references are largely quoted from books contained in Professor Fulton's own library and there are no quotations that have not been carefully verified by the author himself. As such, the book offers an exact, comprehensive, and splendid contribution to the history of medicine.

The contents has been grouped into subjects and chapters are found upon "The Circulation," "Respiration," "Digestion," "The Central Nervous System," and one upon "General Principles." In this way the book cannot be expected to tell a continuous story of a given subject or period, but its intent, apparently, is to produce a 'source book', an intent which is fully justified by a survey of its contents.

More important, perhaps, than these exact quotations from physiological literature, is the spirit with which the book is written and the number of interesting facts that have been observed in regard to the authors. Professor Fulton's main object was to produce a book for medical students, for, as he states, a student's life is often lacking in "contact with the original sources" and his "outlook tends to be confined to second-hand knowledge obtained from lectures and textbooks. For many reasons it is desirable that a medical student be conducted early in his career to the front line trenches of medical and physiological discovery. Let him realize that men as young as himself have made important contributions: that de Graaf at 23 years of age devised the first pancreatic fistula; that Helmholtz at 24 measured for the first time the heat production of frog muscle; that Johannes Müller at 25 had enunciated the principle of specific nerve energies. Let him discover that simple facts were once hidden in a fog of faulty observation and faulty reasoning, and that it was sometimes the enquiring minds of students like himself that made matters clear." Everyone must agree with Professor Fulton in regard to this matter, an idea, perhaps, not new, but in need of constant repetition.

The author also emphasizes the fact that many of the important observations which he has recorded—14 out of 85 selections, at least—were based chiefly, if not entirely, upon human experimentation, in contradistinction to animal experimentation, usually considered the source of physiological discovery. To quote again: "One need only mention Sanctorius, Fabricius, Spallanzani, Blagden, Beaumont, Haldane and Priestley, Barcroft, Cushing, and Lewis, all of whom obtained evidence which would have been either impossible, or far less convincing had the observations been carried out upon animals. This should prove a great stimulus to those who have at their disposal extensive clinical resources."

Other details will be found under the "Book Reviews," but so important is this contribution to American medicine that it seems a worthy subject for editorial comment.

REFERENCES

1 Bibliotheca Osleriana: A Catalogue of Books Illustrating the History of Medicine and Science, Collected, Arranged, and Annotated by Sir William Osler, Bt., and Bequeathed to McGill University. Oxford: The Clarendon Press, 1929.
2 Long, E. R.: Selected Readings in Pathology from Hippocrates to Virchow. Springfield, Illinois: Baltimore, Maryland: Charles C. Thomas, xiv + 301 pp., 4 leaves, 1929.
3 Selected Readings in the History of Physiology, edited by John Farquhar Fulton, M.D. Springfield, Illinois: Baltimore, Maryland: Charles C. Thomas, 1930.

A CLUB PLAN FOR MEDICAL CARE

An announcement has been published setting forth that a club plan is under consideration in Cooperstown, New York, for the purpose of providing medical and hospital care for the members. The group of doctors entering into this agreement will be organized as a guild. The annual membership dues of the club will be twenty-five dollars for an individual and one hundred dollars for a family. Members will be entitled to all forms of service excluding that of obstetrics. The hospital staff will have the

right to decide whether a patient needs institutional care or can be treated at home.

This brief announcement is inadequate for a full understanding of the conditions involved especially with respect to the proportionate distribution of dues collected.

Contract medical service has been discredited in many instances heretofore. It has opened the way to disappointment of patients in that one may expect more attention than the doctor considers to be necessary. After having paid assessments into a common fund patients may, under certain circumstances, feel that they have rights which would not be in harmony with the physician's viewpoint.

It will be of interest to know more about this plan after it has been in operation, and especially whether it offers any solution of the costs of illness or is more acceptable to doctors and patients than a well worked out insurance plan.

THIS WEEK'S ISSUE

Contains articles by the following named authors:

Barney, J. Dellinger. A.B., M.D. Harvard 1904. F.A.C.S. Chief of Service, Urological Department, Massachusetts General Hospital; Assistant Professor Genito-Urinary Surgery, Harvard Medical School; Consulting Urologist, Salem Hospital, Waltham Hospital; Cable Hospital, Ipswich; Gale Hospital, Haverhill; U. S. Marine Hospital, Chelsea; Massachusetts Eye and Ear Infirmary; Hunt Memorial Hospital, Danvers; Peterboro Hospital, Peterboro, N. H. His subject is: "Cancer of the Prostate Without Urinary Symptoms." Page 959. Address: 87 Marlborough Street, Boston.

Williams, Linsly R. A.B., A.M., M.D. Columbia 1899. Director of New York Academy of Medicine and President of New York Tuberculosis and Health Association. Address: 5th Avenue and 103rd Street, New York City. Associated with him is:

Hill, Alice M. A.B., Statistical Field Service, National Tuberculosis Association, New York City. Address: 370 Seventh Avenue, New York City. Their subject is: "The Loss of Time Before a Tuberculous Patient is Admitted to a Sanatorium." Page 961.

Edwards, Edward Allen. M.D. Tufts College Medical School 1928. Research Assistant, Medical Examiner's Office. Instructor in Anatomy, Tufts College Medical School. His subject is: "A Co-occurrence of Enlarged Thymus and Congenital Hernia." Page 969. Address: Boston City Hospital, Boston.

Stevens, Harold W. A.B., M.D. Harvard 1915. Medical Department, Ludlow Manufacturing Associates 1920. Medical Director, Jordan Marsh Company 1920-1930. Instructor, Harvard School of Public Health. His subject is: "The Practice of Medicine in Industry." Page 972. Address: 416 Marlborough Street, Boston.

The Massachusetts Medical Society

Dr. Primrose, Shattuck Lecturer for 1931

Dr. Alexander Primrose of Toronto has accepted the honor of the appointment to deliver the Shattuck Lecture for 1931.

THE BOSTON MEDICAL LIBRARY

HERMAN BOERHAAVE
1668-1738

Above the dead level of mediocrity there stand out, here and there, throughout the ages in which there have been practitioners of the art of medicine, certain conspicuous figures, in whom there has been developed the power to correlate the experiences of others and establish, for that time at least and for many years to come in many instances, a point of departure for further advances along the high road of discovery. To mention the names of Hippocrates, Galen, Sydenham and Boerhaave is to point out four who have probably exerted a wider influence upon practice than any other four that might be named. Herman Boerhaave is not by any means the least conspicuous of the quartet. He was born on December 31, 1668, in Holland, in a small hamlet called Voohout, near Leyden.

Someone has pointed out that the sciences have always flourished most conspicuously under free governments, particularly in Republics. If there is an academic freedom under a non-monarchical form of government it may well be that in Holland, at the middle of the 17th century, Boerhaave found just the conditions under which his genius could reach its fruition. He was the son of a clergyman well versed in Greek, Latin and Hebrew, and particularly so in history. His mother was also an educated woman who was keenly interested in medicine and is said to have been credited with some skill in its practice. She, however, died when he was six years of age and therefore did not exert any great influence upon his medical career. His father married a second time and Herman grew up in a family of thirteen children, ten of whom were girls. The two sons of the second marriage both became eminent divines though the elder of the two was selected by his father for medicine, whereas Herman who was marked by his father for the ministry became the famous physician. With the ministry in view, Boerhaave's father instructed him in "grammar and proceeded with him from the Colloquies of Erasmus to Terence, the Greek

testament and universal History'' and was so successful that ''at eleven years of age he was well versed, in these, expert in the rules of the Latin and Greek grammar, ready at translating and writing Latin, and not ignorant of etymological learning''. As a diversion from the pursuit of such an exacting régime he was instructed and became proficient in, horticulture. At the age of twelve he was afflicted with an ulcer of the thigh which impaired his health and retarded the progress of his studies for five years but was perhaps after all a blessing in disguise, for it gave him his first leaning toward the study of medicine. When he was fourteen, in 1682, he came under the tutelage of Mr. Wynschoton in Leyden and in the course of a year and a half was fitted for the University. The death of his father at this juncture nearly wrecked his chances of going on to a University career but one of such brilliant promise was not long in finding friends who aided him to continue, still, however, with the ministry the goal. Beside the Latin and Greek classics, natural philosophy, logic, ethics and metaphysics, he studied the Hebrew and Chaldee languages, geography and mathematics. His scholastic abilities received frequent recognition in medals and awards and in 1690 he took a degree in philosophy. Having acquired this groundwork he proceeded to the study of divinity. During this period he made the acquaintance of John Van Den Berg, a burgomaster of Leyden, who from that time on was his friend and patron. It was through his influence that Boerhaave was induced to begin the study of medicine, at first as a sort of relaxation. He soon became so interested in it, in part through the preparation he had for it in his studies in natural philosophy, languages and mathematics, that he determined to take a degree in medicine before he was ordained to the ministry.

He assiduously studied Anatomy, Chemistry and Botany. His linguistic abilities enabled him to read Hippocrates and other ancient authors in the original, in whatever text was available, and he then applied himself to modern authors, particularly Sydenham, the English Hippocrates. Indeed such was Boerhaave's admiration for him that he was wont to call him the ''Immortal Sydenham.'' ''His capacity was equalled by nothing but his industry'' says his biographer William Burton. Finally in pursuit of his plan to secure a degree in Physic he went to the University of Harderwick in Gelderland where he took his doctorate in 1693. From there he returned to Leyden to engage in the ministry. On the way back to that city on the boat he became engaged in a controversy with some fellow passengers in which he was led to criticize the arguments of one of the disputants who had bitterly opposed certain doctrines of Spinoza. In that company, and at that time, to take sides with Spinoza was practically to set oneself up as a heretic. When they landed in Leyden some of his maliciously disposed fellow passengers spread abroad reports of the controversy which though false, were none the less prejudicial to Boerhaave's prospects of entering the ministry in Leyden.

His close friends advised him to continue to prosecute his medical studies and though his means were small he followed this advice and determined to remain in Leyden. This involved the refusal of a tempting offer from a first favorite of King William's to settle at The Hague. In 1701 he was persuaded, upon the death of Professor Drelincourt to take the Chair of lecturer on the Institutes of Medicine. In the oration which his induction to this office called forth he succeeded in bringing to the attention of the medical world the most important of Hippocrates' observations and establishing in the minds of his pupils the significance of clinical investigation. Two years later in 1703 he was invited to a vacant professorship of medicine at the University of Gronigen. This he refused and continued for nine years as a lecturer on the institutes without a professorial title. In 1709 he succeeded to the Chair of Medicine and Botany. In 1714 he was chosen to the Rectorship of the University and became the Professor of the Practice of Physic. With this position went a hospital service which afforded him opportunity to study disease all through its course and investigate his patients' maladies at first hand. In connection with this hospital was a postmortem theatre where autopsies were conducted for the benefit of the students and the professors. In the year 1728 he was elected to the Royal Academy of Sciences of Paris and in the year 1730 he was elected unanimously to the Royal Society of London. In 1718 he had been chosen as successor to Le Mort who had been Professor of Chemistry in Leyden and in the oration prepared for that occasion he paved the way for a better attitude toward chemical science by emphasizing its importance, discrediting most of that belonging to the alchemists and pointing out how ''a legitimate restriction of chemistry had caused it to expunge its own errors''. In August 1722 he was the subject of a severe attack of arthritis and again in 1727. Fearing another seizure in 1729, he resigned his professorships of Botany and Chemistry and in 1731 the Rectorship.

It can easily be understood that the fulfilment of the duties which the above mentioned professorships demanded as well as the Rectorship might make serious inroads upon his time but this was but a small part of his activities. Somewhere the ancients have depicted labor as the antechamber to the Temple of Honor and judging from the amount of work which Boerhaave accomplished this may well have been the case with him for he was constantly being called to consult over the sicknesses of royalty all over

Europe, but would never permit himself to go. Just as Hippocrates refused the importunity of Artaxerxes to reside at his Court, so did Boerhaave refuse the solicitations of the crowned heads of Europe. Peter the Great did come to consult him as did also the Grand Duke of Tuscany. His correspondence was very extensive and the numbers of students whom he instructed year after year were enormous. He followed the custom of the Netherlands and remained single until his fortune was established and then, in his forty-second year, married the daughter of a burgomaster of Leyden with whom he lived until his death, twenty-eight years later. He amassed a considerable fortune, for those times, not through exorbitant charges but rather through the frugality of his manner of life. He was not penurious however; on the contrary he was liberal though in an unostentatious manner. In all his human relations he seems to have been entirely above reproach or even criticism. In common with all men of distinction he came in for his share of calumny by which however he was not outwardly disturbed. To someone who marveled at his attitude in this respect he replied: "The sparks of calumny will be presently extinct of themselves, unless you blow them." His was a deeply religious nature and all his life he set aside an hour a day for his devotions and, whenever his duties permitted, he was an attendant upon public worship. He never neglected any call to serve in any public or private capacity. He had naturally a robust constitution but was always temperate in everything except work. Mornings and evenings he devoted to study, reserving the mid portion of the day for domestic and public affairs. He rose at four during the summer and five during the winter and usually retired at ten. His exercise was gained from walking or riding and when tired he refreshed himself with music of which he was very fond. He played and sang himself. He was devoted to the cultivation of plants and trees and during his later years his greatest delight was in his garden of about eight acres where he had every tree and shrub that would grow in that soil and climate. He conversed in English, French and German and read Spanish and Italian with ease. The Latin he spoke extempore in lectures and conversation was so clear that he could make even abtruse matters plain to those who had any familiarity with the language. The philosophy which had carried him so serenely through life sustained him in his last years during which he was called upon to endure much suffering. He died September 23, 1738 only three months before his seventieth birthday. If any argument were necessary to prove the value of a liberal education in the production of a skilled physician, it would be provided in a review of the career of Herman Boerhaave. The mental training he received in preparation for the Christian ministry was of undoubted value in his mental development, liberalizing his attitude and furnishing him with the equipment by which he was enabled to familiarize himself with the experiences of the past at first hand. It was through this discipline, in no small measure, that he was enabled to grasp the truth in the crude science of the day and direct its light upon the problems of medicine. Chemistry, physics and botany unquestionably impressed upon him the value of accurate observation and led him to apply the methods so essential in their study to the subject of clinical observation and investigation at the bedside. About fifty of his articles have been preserved. Some are his lectures on the Institutes of Medicine and the Practice of Physic, some concern the sciences in which he was interested, particularly botany and chemistry, some are purely philosophical and still others are case reports. Whatever they are they reveal, in the words of one of his admirers and his biographer, "an exquisite discernment accompanying the severest application to books, practice and experiments" and this "is apparent throughout those inestimable works, which completed his reputation and entitle him to the grateful commemoration of posterity".

MISCELLANY

ADDITIONS TO THE HOUSE OF THE GOOD SAMARITAN

THE APPEAL FOR FUNDS TO ENABLE THE HOSPITAL OF THE GOOD SAMARITAN TO ENLARGE ITS BED CAPACITY AND THEREBY STUDY THE PROBLEM OF ACUTE RHEUMATISM IN CHILDHOOD WITH ESPECIAL REFERENCE TO THE ETIOLOGICAL SIGNIFICANCE IN HEART DISEASE

On the evening of November 5 the ballroom of the Copley-Plaza was filled with the guests of the Board of Management and the Executive Committee of the Hospital of the Good Samaritan assembled to hear an announcement of the plans to enlarge the capacity of the hospital and engage in further study of rheumatism and heart disease.

After enjoying the hospitality of the officers of the hospital the meeting was called to order by the Honorable Herbert Parker, who, taking as his text the parable of the Good Samaritan, explained the purposes of the institution as outlined in the above mentioned plans. Although His Excellency, Governor Allen, had expected to be present, he was unavoidably detained elsewhere. He had sent to the Chairman a letter giving his cordial endorsement of the project and pledging the support of his influence in the plan under way. Following the reading of this letter, Mrs. Nathaniel Thayer, one of the sponsors and a member of the board of managers, gave a history of the founding of the hospital by Miss Anne Smith Robbins, who, becoming aware of the need for the care of cases of illness which could not be met by the Massachusetts General Hospital at that time, devoted her fortune of about fifty-three thou-

sand dollars to the purchase of buildings in the West End of Boston, and herself living in the hospital thus created, dedicated her life to the service of its inmates. Under her growing interest in those who needed this resource, this remarkable woman installed from time to time special types of service, each being a pioneer effort in hospital work; for example, the care of chronic and convalescent cases, an orthopaedic clinic, a tuberculosis ward, and later an open-air camp, a dental service, a cancer ward, a department for the care of cases of heart disease, a convalescent home and hospital social service organization and a ward for rheumatic fever patients. Some of these services have been discontinued because of facilities in other hospitals.

It will thus be seen that Miss Robbins had vision and a warm responsive heart for the requirements of the unfortunate.

In due time the original hospital buildings were outgrown and a new hospital opened at 25 Bennet Street, Boston.

The present campaign is for an endowment of five hundred thousand dollars, of which four hundred thousand is to provide an income of twenty thousand a year, and one hundred thousand for a new building devoted to research. Mrs. Thayer was followed by Professor Hans Zinsser who explained the scientific features of research in non-technical language, setting forth in detail the great need for study in the causes and effects of rheumatic fever as it is found in children and prophesied a comparatively early elucidation of some of the mysteries of rheumatic fever with the expectation that thereby there would follow great diminution of infection of the heart which would reduce to a marked degree this crippling and fatal disease.

Dr. George H. Bigelow, Massachusetts Commissioner of Health, then explained the problem of the public health departments with respect to the economic and social problem of chronic diseases and gave statistics with respect to the incidence of heart disease and the need for more facilities to care for the diseases of childhood for, with rheumatism and heart disease especially, future progress must depend on better understanding of these maladies if the crippling and fatal effects, common to both, are to be modified. He explained the inability of acceding to the request made to his department to assign beds in the tuberculosis hospitals for the care of heart cases which has been suggested on the assumption that since the tuberculosis death rate is decreasing, there must be a lessened demand for beds in the tuberculosis hospitals. The existing conditions are that the demand for beds in these hospitals is increasing because there is a better appreciation of the value of hospital treatment as shown by the utilization of all available beds and, by the fact that there is a waiting list.

He stressed the need for more beds for children afflicted with rheumatism as shown by the insufficient number of beds in the Children's Hospital and other institutions and that even with this addition at the House of the Good Samaritan more will be needed than are in prospect.

He endorsed the encomium of the medical men working in the various institutions dealing with the problems under consideration and felt confident of the future triumphs of medicine in this field, and paid warm tribute to the work of the Hospital of the Good Samaritan.

The Rt. Rev. William Lawrence gave a delightful and practical address on the art of gathering money for worthy causes, explaining his success in this field because he never begged for contributions but in his approach to possible contributors laid the foundation for an appeal by showing the importance and value of the project under consideration.

He intimated that success depends on making a person feel that in helping to support a worthy cause he is given a privilege which will be a source of gratification all through life. He emphasized his argument by the recital of personal experiences.

It is his opinion that, although times are hard, there is an abundance of money to be secured by the proper approach, which must be made with an evidence of personal sincerity and self-respect.

He expressed his warm admiration for those who are behind this movement and gave to the plan for helping the Good Samaritan his hearty support.

APPOINTMENTS AND PROMOTIONS AT THE BOSTON UNIVERSITY SCHOOL OF MEDICINE

I. New Appointments

Associate Professors

Martin J. English, M.D., Associate Professor of Pediatrics.

Assistant Professors

Harold Bowditch, M.D., Assistant Professor of Medicine.

Eli Friedman, M.D., Assistant Professor of Clinical Pediatrics.

Augustus McGarry, M.D., Assistant Professor of Clinical Pediatrics.

Instructors

John Dunphy, M.D., Instructor in Clinical Pediatrics.

David I. Frankel, M.D., Instructor in Tropical Diseases.

B. I. Goldberg, M.D., Instructor in Clinical Medicine.

George Kahn, M.D., Instructor in Clinical Pediatrics.

Arthur McGugan, M.D., Instructor in Neurology.

W. T. O'Halloran, M.D., Instructor in Medicine.

Charles A. Powell, M.D., Instructor in Tropical Diseases.

John P. Trainor, Jr., M.D., Instructor in Clinical Pediatrics.

N. A. Welch, M.D., Instructor in Clinical Medicine.

Assistants

Robert Barton, M.D., Assistant in Neurology.

Kenneth Christophe, M.D., Assistant in Orthopedic and Fracture Surgery and Anatomy.

Morris Courtiss, M.D., Assistant in Obstetrics and Gynaecology.

Max Davis, M.D., Assistant in Gynaecology.

Panos S. Dukakis, M.D., Assistant in Anatomy.

Norman W. Elton, M.D., Assistant in Medicine.

Lucian Foye, M.D., Assistant in Medicine.

Robert O. Gilmore, M.D., Assistant in Opthalmology.

Morris Ingalls, M.D., Assistant in Pediatrics.

Theodore K. Keith, M.D., Assistant in Anatomy.

William M. Konikov, M.D., Assistant in Anatomy.

Leo J. Lynch, M.D., Assistant in Anatomy.

Herbert E. Plumer, M.D., Assistant in Medicine.

James Redmond, M.D., Assistant in Pediatrics.

Jennie Segal Roitman, M.D., Assistant in Gynaecology.

Ensio K. F. Ronka, M.D., Assistant in Anatomy.

Lester D. Watson, M.D., Assistant in Medicine.

II. Promotions

Professors

Charles T. Howard, M.D., Professor of Clinical Surgery.

Samuel R. Meaker, M.D., Professor of Gynaecology.

Associate Professors

John A. Foley, M.D., Associate Professor of Clinical Medicine.

Brenton R. Lutz, Ph.D., Associate Professor of Physiology.

William R. Morrison, M.D., Associate Professor of Clinical Surgery.

Burnham S. Walker, Ph.D., Associate Professor of Chemistry.

Alice S. Woodman, M.D., Associate Professor of Histology and Embryology.

Leland C. Wyman, Ph.D., Associate Professor of Physiology.

Assistant Professors

Clifford D. Harvey, M.D., Assistant Professor of Surgery.

Louis G. Howard, M.D., Assistant Professor of Orthopedic and Fracture Surgery.

Samuel L. Marnoy, M.D., Assistant Professor of Orthopedic and Fracture Surgery.

H. C. Peterson, M.D., Assistant Professor of Pediatrics.

J. J. Skirball, M.D., Assistant Professor of Clinical Ophthalmology.

Edward C. Smith, M.D., Assistant Professor of Pediatrics.

Albert C. Toppan, M.D., Assistant Professor of Clinical Pediatrics.

Waldo W. Walker, M.D., Assistant Professor of Laryngology and Rhinology.

Instructors

Howard A. Bouvé, M.D., Instructor in Clinical Surgery.

Joseph H. Burnett, M.D., Instructor in Clinical Surgery.

Ralph H. Hopkins, M.D., Instructor in Clinical Ophthalmology.

Leighton F. Johnson, M.D., Instructor in Applied Anatomy.

Barnet M. Wein, M.D., Instructor in Clinical Otology.

Lester R. Whitaker, M.D., Instructor in Anatomy.

MORTALITY RATES

Telegraphic returns from 78 cities with a total population of thirty-five million for the week ending October 25, indicate a mortality rate of 11.1 as against a rate of 11.8 for the corresponding week of last year. The highest rate (17.1) appears for Salt Lake City, Utah, and the lowest (7.2) for Waterbury, Conn. The highest infant mortality rate (17.3) appears for Nashville, Tenn., and the lowest for Fall River, Mass., Knoxville, Tenn., and Schenectady, N. Y., which reported no infant mortality.

The annual rate for 78 cities is 12.0 for the forty-three weeks of 1930, as against a rate of 12.7 for the corresponding weeks of 1929.

CORRESPONDENCE

AN ENDORSEMENT OF SERGEANT TOWNSEND

Boston, Mass., November 3, 1930.

Editor, *N. E. Journal of Medicine*,
165 Newbury Street,
Boston, Massachusetts.

Dear Doctor:

My attention has been called to newspaper reports concerning threats against Sgt. Richard K. Townsend, of the State Police, and members of his family.

Realizing as I do the wonderful work which has been done by Sgt. Townsend in the protection of the public against the operations of unregistered and unsafe practitioners of medicine, it seems to be about as low and cowardly an attempt as can be made to lessen the effectiveness of his work by means of threats against him and his family. I do not think for a moment that any threats will deter this efficient officer in the full performance of his duty in the future as he has performed it in the past. I believe that most of the responsible physicians of this state have heard of Sgt. Townsend's success in his work to keep the medical profession clean and it goes without saying that every decent man approves of the work. I know that you are doing everything in your power to protect the public from the operations of unsafe and incompetent men who practice medicine and I am sure that everything possible will be done to protect this good officer against any danger of such injury as has been threatened.

With assurances of my high personal esteem, I remain

Very sincerely yours,
Jos. E. Sternberg, M.D.

RECENT DEATHS

CONIBEAR—A pioneer woman physician of Attleborough has died in the person of Dr. Laura Viola Gustin Conibear, who departed this life at her home in that city, November 3, 1930.

Born in Westbrook, Maine, in 1852, she was graduated from the Woman's Medical College of Pennsylvania at Philadelphia in 1874. After taking postgraduate courses she settled in practice in New Bedford in 1875 and a year later married Dr. George Mackie of Attleborough. In 1885 she joined the Massachusetts Medical Society and in 1888 opened a sanitarium for women in Attleborough, practising neurology largely for many years. For 12 years she served as a member of the school committee and she was vice-president of the executive committee of Sturdy Memorial Hospital. She retired in 1920.

Dr. George Mackie died in 1906, and in 1927 she married Dr. G. A. Conibear of New York who survives her. Dr. Laura Conibear's mother, the Rev. Ellen G. Gustin, was for long the pastor of the West Mansfield Christian Church.

PARMELEE—Dr. William Josiah Parmelee, a practitioner of Springfield for the past 24 years, died at his home in that city, October 28, 1930, aged 72. Dr. Parmelee was born in Hopkins, Michigan, August 13, 1858. He was graduated from the Western Reserve University in 1880 and from the Andover Theological Seminary in 1883. Entering the Congregational ministry he continued in the clerical profession for ten years, studying medicine during the latter part of the time and receiving the degree of M.D. from the New York University Medical College, New York, in 1890. He joined the Massachusetts Medical Society in 1892 being then settled in Cummington. Later he moved to Hinsdale and Worthington and, in 1906, to Springfield, where he had practiced since.

Dr. Parmelee is survived by his widow, Mrs. Emily F. Parmelee of Springfield and by two sons and two daughters.

OBITUARIES

RESOLUTIONS ON THE DEATH OF DR. BOOTH E. MILLER*

Dr. Booth E. Miller, a member of the Massachusetts Psychiatric Society, died on January 8, 1930, of wounds inflicted by a patient in the Harrisburg State Hospital.

He was born in Reading, Pennsylvania, November 26, 1886, and was graduated from the University of Pennsylvania School of Medicine in 1910. After a year's internship and two years of general practice, he entered the Iowa State Service as a member of the staff of the Cherokee State Hospital. In 1917 he entered the Neuro-psychiatric section of the Army Medical Corps, and served in this country and overseas until October 1919, when he returned to Cherokee as Assistant Superintendent. In November 1924 he became Senior Assistant Physician at the Foxborough State Hospital, leaving in November 1925 to undertake a demonstration of psychiatric service in the Indianapolis City Hospital. In 1927 he became clinical director of the Harrisburg State Hospital. While making his ward rounds there on the morning of January 8, 1930, he was attacked with a knife by a paranoid patient, and died within a few minutes of hemorrhage.

Dr. Miller combined with devotion to his work and his patients a most agreeable and friendly personality which endeared him to associates and patients alike. That he lost his life at the hands of one whom he was trying to help makes his death doubly tragic.

The Massachusetts Psychiatric Society hereby places upon record its deep regret at the loss of Dr. Miller, and expresses to his widow the heartfelt sympathy of its members in her bereavement.

*Adopted at the Annual Meeting of the Massachusetts Psychiatric Society, October 24, 1930.

RESOLUTIONS ON THE DEATH OF DOCTOR GEORGE LONEY WALLACE*

The untimely death of Dr. George Loney Wallace removed from the broad field of Psychiatry one of its outstanding figures.

Dr. Wallace was born in West Gore, Nova Scotia, February 5, 1872. He was the son of a clergyman, and a member of a distinguished family. He was reared on a farm, but his early interest in education indicated that his career would follow along other lines. He began to teach school at the age of eighteen. When he reached the age of twenty years he realized the need of a broader field for the display of his activities, and coming to Massachusetts sought employment at the Massachusetts School for Feebleminded.

At Waverley, his outstanding qualities and qualifications soon attracted the attention of the late Dr. Walter E. Fernald, whose inspiration stimulated Dr. Wallace to pursue a course in medicine. He graduated from the Baltimore Medical College in 1898, ranking first in a large class, and on graduation became a member of the staff of the Massachusetts School for Feebleminded. Here his work was of superior quality, and promotion came rather quickly, and finally for a number of years he held the position of first assistant physician under Dr. Fernald.

On March 1, 1907 he was appointed Superintendent of the Wrentham State School, which at that time consisted of nothing more than the enabling act, and the acquisition of a tract of land by the

*Adopted at the Annual Meeting of the Massachusetts Psychiatric Society, October 24, 1930.

State. He remained as Superintendent of the Wrentham State School until his death on July 3, 1930.

The Wrentham State School is his memorial, displaying and presenting his unusual creative powers and rare conception of the practical needs of the mentally defective individual. From the standpoint of construction, he had to an unusual degree the ability to look into the future, and to correctly arrange the integrating and coördinating of the various units which went to make up the completed institution. In this respect he was many years ahead of his times.

Not only was he a great builder and a great institution administrator, but he possessed unusual insight into the whole problem of mental defect. The sheet anchor of his successful management was service, and he was able to instill into the management and working of the whole school a very definite and wonderful spirit, that permeated and seemed to fit into the physical fabric. The Wrentham State School under Dr. Wallace was more than a collection of buildings filled with children who were being taught and trained. It was really the spirit of Dr. George Loney Wallace. He was a natural leader, and became an ideal to his trustees, his physicians, the other personnel, and greatest of all, to every child under his care.

His activities were not confined to the successful operation of his institution. His work extended far into the community; he recognized the necessity of attacking the problem at its source. So great and widespread was his reputation that his advice was sought by other States relative to the construction and management of institutions for the feebleminded, and the prosecution of Mental Hygiene activities. Scarcely a week passed that some distinguished visitor from either one of our United States, or from some foreign country, did not visit the Wrentham State School, to study the School and its operation as a model, and to learn from the man himself what was best concerning the problem of caring for the feebleminded.

Various organizations sought him as a speaker. He was a frequent contributor to the literature dealing with mental defect, and our knowledge of this subject has been greatly enriched by his study and efforts. He was a truly scientific man. He was a member of the State Medical Society, American Medical Association, The New England Society of Psychiatry, and the Massachusetts Psychiatric Society, of which he was Vice-President during the past year. He was an important and active member of the National Committee for Mental Hygiene, and was twice honored by being elected President of the American Association for the Study of the Feebleminded, his last presidency being on the occasion of the World Congress of Mental Hygiene, held in Washington in May, 1930.

No small part of his great success was due to the charm of his personality. Pleasing, he could be firm, and was forever just. Possessing high ideals, he was conservative, but liberal, where liberality was required. Broad in his views, square in his judgment, he was always optimistic, hopeful, helpful, and especially sympathetic and considerate of the rights of others; his own comfort and material benefit ever being subordinated to the pleasure and welfare of others. He was respected and admired by his confreres, revered and loved by his subordinates, and actually worshipped by the children under his care.

His immeasurable loss is not only to the Wrentham State School and to the State of Massachusetts, but is a loss sustained to some extent by all other States, and even other countries of the world.

The Massachusetts Psychiatric Society has ample cause for being proud of the achievements of this great man.

NEWS ITEMS

DEGREE OF DOCTOR OF LAWS CONFERRED UPON DR. WELCH—The degree of Doctor of Laws was conferred upon Dr. William Henry Welch of Johns Hopkins University, October 16, at the opening session of the sixty-sixth convocation of the University of the State of New York. Dr. Frank P. Graves, Commissioner of Education, said in part:

"No man has done more to make available to America the blessings of modern scientific medicine and public health work. A pioneer, you have blazed the trail leading from the discoveries of Pasteur and Koch to the wonders of pathology and bacteriology demonstrated through the great hospitals and research laboratories of today."

A DECISION OF THE BOARD OF REGISTRATION IN MEDICINE OVERRULED—On testimony of State investigators the Board of Registration in Medicine suspended the registration of Dr. George J. Ott of Boston several months ago.

An appeal from the decision of the Board was taken and heard by Judge William C. Wait of the Supreme Court with the result that a decree was ordered reversing the decision of the Board.

Assistant Attorney General C. F. Lovejoy has entered an appeal from the decree ordered by Judge Wait to the full bench of the Supreme Court in behalf of the Board of Registration.

NOTICES

RADIO MESSAGES

SPONSORED BY THE STATE DEPARTMENT OF PUBLIC HEALTH, COURTESY WBZA

Every Wednesday at 5:20 P. M.

November 19—"Abdominal Pains", Dr. Horace K. Sowles.

November 26—"The Common Cold", Dr. W. T. Haley.

December 3—"Nephritis", Dr. W. H. Ohler.

December 10—"So-Called Chronic Appendicitis", Dr. Charles C. Lund.

December 17—"Accidents", Dr. Louis G. Howard.

December 24—"Some Diseases We Don't Talk About—And Why Not?" Dr. N. A. Nelson.

December 31—"The Hospital and the Public Health", Dr. Henry M. Pollock.

A "Health Forum" directed by the State Department of Public Health, courtesy WEEI, began October 2, 1930 and will continue Fridays at 4:50 P. M.. Queries and Answers will be broadcast.

Questions on health and prevention of disease may be sent to "Forum", State Department of Public Health, State House, Boston, Mass.

REMOVAL

Robert C. Lavrakas, M.D., announces the opening of his office at 536 Commonwealth Avenue (Kenmore Station), Boston.

NEW OFFICERS OF DELTA OMEGA

Dr. John A. Ferrell of the Rockefeller Foundation, New York, was elected president of Delta Omega, the honorary public health society, at the annual meeting held at Forth Worth, Texas, on October 29, 1930. Dr. Ferrell succeeds Dr. C. C. Young of Lansing, Michigan. Other officers elected were Dr. James A. Tobey, New York, as vice-president, and Professor Ira V. Hiscock of the Yale School of Medicine as secretary-treasurer. Dr. George W. McCoy, Director of the National Institute of Hygiene. Washington, D. C., was elected an honorary member of the society.

Delta Omega now has 316 members, distributed in six chapters at the Johns Hopkins School of Hygiene and Public Health, Harvard School of Public Health, Massachusetts Institute of Technology, University of Michigan, Yale School of Medicine, and University of California. The honorary members of the society include President Hoover, Surgeon General H. S. Cumming, Dr. Charles V. Chapin, Dr. F. F. Russell, Sir Arthur Newsholme, Dr. W. S. Rankin and Dr. S. Josephine Baker.

The society has made arrangements with the American Public Health Association for the reprinting of Dr. William Budd's classic work on typhoid fever which first appeared in 1873.

REPORTS AND NOTICES OF MEETINGS

THE ANNUAL MEETING OF THE MASSACHUSETTS PSYCHIATRIC SOCIETY

At the annual meeting which was held at the Hotel Somerset, October 24, the President, Dr. L. Vernon Briggs, presided; the speaker was Dr. A. Warren Stearns, Commissioner of the Department of Correction, on the topic "A State Program of Crime Prevention." The following officers were elected:

President—Dr. E. H. Cohoon, Harding, Mass.

Vice President—Dr. A. Warren Stearns, Boston.

Secretary-Treasurer — Dr. Winfred Overholser, Boston.

Councilors—Dr. L. Vernon Briggs, Boston; Dr. Ransom A. Greene, Waverley.

Respectfully submitted,

WINFRED OVERHOLSER, M.D., *Secretary-Treasurer.*

The resolutions which appear on pages 1003 and 1004 were adopted at this meeting.

CAMBRIDGE TUBERCULOSIS ASSOCIATION

The twenty-seventh annual meeting of the Cambridge Tuberculosis Association was held Thursday afternoon, October 30, at its headquarters, 689 Massachusetts Avenue. Educational and preventive work against tuberculosis and cancer carried on by the Association was described to guests at the meeting by members of the Educational Committee. Dr. W. Stewart Whittemore, chairman of the Cancer Committee, spoke informally on the newly established cancer clinic at the Outpatient Department of the Cambridge Hospital which opened November fourth under the direction of Dr. Francis Findlay.

Activities carried on last year by the Association were described by Dr. Hilbert F. Day, Mrs. Charles P. Vosburgh, Mrs. Charles F. Whiting, Mrs. Raymond Calkins, Mrs. Frederick Lovejoy and Dr. Felix McGirr. During the summer the Association cared for thirty-seven undernourished girls between eight and twelve at Sunshine Camp and will continue to supervise their health during the winter. It arranged systematic health education in the classrooms of five parochial schools and health classes for undernourished children in public schools.

The Association carried out a monthly health conference for the mothers of children predisposed to tuberculosis and helped towards the comfort and entertainment of patients at the Tuberculosis Hospital, as well as finding employment for cured patients. Moving pictures of the girls at Sunshine Camp were shown by Mr. Frederick H. Lovejoy.

Guests were received by Mrs. Joseph G. Thorp, Mrs. Rufus P. Williams, Miss Louise W. Jackson, Mrs. Hilbert F. Day, and members of the Board of Managers, assisted by a group of Radcliffe students. Tea was arranged by Mrs. Percy R. Bridgman and Mrs. A. Lawrence Shaw.

The following Officers and Board of Managers were elected for the coming year: Dr. Hilbert F. Day, president; Mrs. Rufus P. Williams, Dr. Felix McGirr, vice presidents; Miss Louise W. Jackson, secretary and William D. Swan, Jr., treasurer. The Board of Managers includes the Rev. J. Thayer Addison, Edward A. Andrews, Mrs. N. Henry Black, Mrs. Percy R. Bridgman, Henry R. Brigham, Mrs. Raymond Calkins, Dr. Eugene A. Darling, M. E. Fitzgerald, Thomas Hadley, the Rev. Augustin F. Hickey, Arthur N. Holcombe, Dr. Eliot Hubbard, Jr., Mrs. Gordon Ireland, Harry W. Joel, Mrs. Carl H. Litzelmann, Mrs. Frederick H. Lovejoy, Frederick H. Lovejoy, Dr. Paul H. Means, Mrs. George L. Nicholas, Jr., Miss Elizabeth Perkins, Mrs. Thomas Reed Powell, Benjamin Roseman, Mrs. E. Lawrence Shaw, the Rev. Elmer E. Thompson, Mrs. Joseph G. Thorp, Mrs. Charles P. Vosburgh, Dr. Joseph M. Wadden, Mrs. Charles F.

Whiting, Dr. W. Stewart Whittemore, and Mr. Gordon Willis.

WORCESTER NORTH DISTRICT MEDICAL SOCIETY

The regular Quarterly Meeting of the Worcester North District Medical Society was held at the Leominster Hospital, Tuesday, October 28, at 4:30 P. M.

Doctors Walter F. Sawyer and Francis M. McMurray, presented the following Memorial on the death of Dr. E. J. Tully:

"As we meet together, year after year, seldom do we pause to realize the changes that are taking place in the personnel of our society. New faces make their appearance. The older members, one by one, disappear, and the Society moves on. To those of us, who have been for some time Fellows of the Worcester North District Medical Society, these changes and the loss of members with whom we have long been associated, surely cause us to pause in reflection upon these transitions.

In recording the death of Dr. Edward J. Tully, your committee, through long and intimate associations in his professional career can truly bear witness as to his personal and professional attributes. Somewhat reserved in manner, yet keenly interested in and thoughtful toward the welfare of his patients, he readily won their respect and confidence. Possessed of subtle wit and natural fondness for children, he had no difficulty in gaining their love and friendship. His companionship with his children, and his love for his family and home life were striking manifestations of his true character.

Dr. Tully was born in Lowell, Mass., June 3, 1870. His preliminary education was obtained in the schools of Lowell, and he was graduated from the Lowell High School. He entered the Harvard Medical School, and received his degree therefrom in 1892. Choosing Fitchburg as the scene of his medical activities, he began practice, first in West Fitchburg, moving later to the city proper. He became one of the early assistant physicians to the Burbank Hospital, and, on the death of Dr. H. H. Lyons, in 1908, succeeded him as Visiting Physician, which position he occupied until his death. Interested in civic and educational affairs, he was elected a member of the School Board in 1893.

In 1901, he was married to Miss Mary Ward of Lowell, who, with two children, Edward and Ursula survive him.

Dr. Tully was admitted to the Massachusetts Medical Society in 1892. He was a censor for seven years, and served the Worcester North District Medical Society as its President in 1912, having previously filled the position of Annual Orator.

In memory of an honored and respected associate, a friend, and loyal Fellow of this Society, we, subscribe our names, as your committee."

WALTER F. SAWYER,
FRANCIS M. MCMURRAY.

Dr. A. L. Brett of Boston, the consulting Orthopedic Surgeon to three of the Hospitals, in the District, spoke on "Some Interesting Operations Taken With A Small Moving Picture Camera." His remarks were illustrated by moving pictures, graphically illustrating the condition for which the operation was performed; the technic of Osteoplastic Surgery and the end results. The fact that several local cases were among those shown added to the interest.

C. H. JENNINGS, *Secretary.*

THE JOINT MEETING OF THE ESSEX NORTH, ESSEX SOUTH, MIDDLESEX NORTH AND MIDDLESEX EAST DISTRICT MEDICAL SOCIETIES

The eighty-ninth quarterly meeting of the Essex North District Medical Society was held October 22 in Bedford at the Veterans' Bureau Hospital, a joint meeting with the Essex South, Middlesex North and Middlesex East Districts. A very excellent steak dinner was served to the members of the societies by the Hospital.

Dr. Joseph A. Mehan of Lowell presided and the meeting was opened by an exposition of the state work on tuberculosis by Doctor Wakefield of the State Department, stressing the value of child examination and citing some particular cases in which the clinics have been invaluable.

Dr. Robert B. Greenough, President of the State Society, discussed the coming anniversary year and also the work of the Legislative Committee. He recommended the adoption by other societies of the plan initiated by Plymouth County. He reported progress in the malpractice situation, stating that for the first time the insurance representatives and the Massachusetts Medical Society Committee had been brought together. He went into the matter of special clinics and health activities of lay organizations, calling attention to the fact that these organizations were being urged very strongly, and that it was important that these clinics and the work of industrial physicians should not invade or conflict with the work of the family physician. The cancer clinics were cited as examples of coöperation with the local society.

Dr. Winthrop Adams, Superintendent of the Bedford Sanitarium, then gave a very enlightening discourse on the Veterans' Bureau and its work. He called attention to the fact that there are fifty Veterans' Bureau Hospitals in the United States and eleven more under construction, that the Veterans' Bureau has expended one hundred and six billion dollars since the war for hospitals, that there are thirty thousand cases in these hospitals now and fifteen hundred veterans in civilian hospitals maintained at a cost of thirty million dollars per year. In his prior work as Medical Director of the Veterans' Bureau at Washington, contact with Congressmen demonstrated to him surprising liberality in the expenditure of funds for these purposes. He recalled the fact that under the present law any veteran of any war may now receive hospital care at government expense when beds are available and for any disability, whether or not related in any way to his military service. He further stated that there was a strong trend toward provision of free out-patient

service for veterans and that it was highly probable that this would be followed very soon by free outpatient treatment for families and dependents of veterans.

This last proved an excellent introduction to the next speaker, Dr. Charles E. Mongan of Somerville, who discussed some of the problems in Medical Economics. Doctor Mongan stated that the general practitioner is the only man today who still strives to keep his individuality in a highly organized machine age. He asserted that it would be fatal for the profession to continue its "laissez faire" attitude. He called attention to the fact that the British Medical Association has gone over to state medicine and wondered whether the people would receive a better grade of service under this system. In talking about the hospital side of medical care, he stressed the extravagance in hospital construction as a more important item than the reasonable charges of the practitioner. He called attention to the Peoples' Health Institute of Chicago, which pays ninety-six thousand dollars a year for advertising and has given over three million treatments in ten years.

An assessment of seventy-five cents was levied to cover the cost of the dinner.

Doctor Adams gave a cordial invitation to all Fellows to visit the institution, either singly or in groups, at any time.

The meeting then adjourned and although the hour was late, some of the Fellows took advantage of the opportunity to inspect the hospital grounds and equipment.

THE CUTTER LECTURE

The Cutter Lecture on Preventive Medicine was delivered at the Harvard Medical School October 28. Dr. Milton J. Rosenau, presiding, introduced the guest lecturer, Professor Weinberg of the Pasteur Institute, Paris, whose work during the past thirty years had covered many and varied subjects before his attention was turned to the study of the anaerobic bacteria.

Professor Weinberg's subject was "The Anaerobes and Their Serotherapy." From the beginning of the recent war the prevalence of tetanus and gas gangrene made a study of anaerobic antisera imperative. Tetanus was less of a problem as it was quite well understood and an antiserum was available.

The other organisms of this group, B. Welchii, vibrion-septique, oedemiatens, etc., cause a dissecting edema, with proteolysis, putrefaction, with terminal septicemia and generalized hemorrhages. After primary infection, the process develops rapidly so that prompt action is necessary. The best results have been obtained by giving polyvalent antigangrenous serum immediately rather than waiting for the report of the bacteriologist, followed by specific antiserum. The best results were reported from the French army. It is suggested that this is a more rational procedure than administration of specific sera because, so close is the interrelationship among the various antigens and antibodies concerned, that the neutralization of one species is sufficient to render the others non-toxic. Thus when diluted five times, the polyvalent serum is almost as effective as monovalent anti-Welchii serum given undiluted.

Since the war bacteriologists have turned systematically to the study of the organisms forming the flora of the various tracts of the body. Organisms of the anaerobic group, especially B. Welchii, have been found to be almost invariable inhabitants of one or another body cavity. In health the walls of the cavities, such as the large gut, are impermeable to both these organisms and their toxins, but when this impermeability is broken by disease the normal flora offers the not inconsiderable menace of secondary invasion of organisms and dissemination of toxins. Careful blood cultures in the course of many diseases will reveal the transitory presence of one of this group of organisms, and this fact, harmless per se, offers the menace of localizing in a locus minoris resistentiae and the subsequent production of gas gangrene.

A practical application of this finding has been tried in appendicitis, especially gangrenous appendicitis.

In conclusion, Professor Weinberg stated that he is not offering a panacea, but only showing that these antisera are more valuable than has been formerly thought.

THE NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS

This Society has issued invitations for its 1930 Annual Conference in coöperation with the National Organization for Public Health Nursing, New York State Department of Education, New York City Department of Health and Sight-Saving Class Supervisors and Teachers, November 17-18, 1930. Headquarters: Russell Sage Building, 130 East Twenty-second Street, New York City.

THE NEW ENGLAND ROENTGEN RAY SOCIETY

The next meeting will be held at the Boston Medical Library Friday night, November 21, 1930, at 8:15.

Scientific Session: "The Thirty-fifth Anniversary of the Discovery of the Roentgen Rays." Dr. Otto Glasser, Cleveland, Ohio.

The usual dinner will be held at the Harvard Club at 6:30.

DR. T. R. HEALY, *Secretary.*
370 Marlborough Street, Boston, Mass.

BOSTON MEDICAL HISTORY CLUB

Sprague Hall, 8 Fenway
Monday, November 17, at 8:15 P. M.

The Life of Paracelsus by Thomas Fuller in his "Holy and Profane State", 1642. Dr. W. P. Coues.

An early lost manuscript of Darwin's "Origin of Species". Dr. I. H. Coriat.

Glimpses into the life of a Boston medical hero of colonial times. James F. Ballard.

Demonstration of important recent accessions. Miss Blake Beem.

JAMES F. BALLARD, *Secretary.*

THE CLINICAL CONFERENCE OF THE NEW ENGLAND HOSPITAL FOR WOMEN AND CHILDREN

The regular clinical conference of the New England Hospital for Women and Children will be held at the hospital, Dimock Street, Roxbury, on Thursday, November 20, at 8 P. M. The following cases will be presented and discussed by members of the staff. 1. Prematurity, with septicemia and multiple osteomyelitis. 2. Phenolphthalein poisoning in a breast fed infant.

ALICE H. BIGELOW, M.D., *Secretary.*

THE SOUTH END MEDICAL CLUB

The next regular meeting of the South End Medical Club will be held at the office of the Boston Tuberculosis Association, 554 Columbus Avenue, Boston, on Tuesday, November 18, 1930, at 12 noon.

The speaker will be William J. Brickley, M.D., Associate Medical Examiner for Suffolk County, and his subject will be, "The Doctor in Court."

All physicians are cordially invited. Luncheon will be served at 1 o'clock.

BERKSHIRE DISTRICT MEDICAL SOCIETY

The next meeting of this Society will be held on November 17 at 8:15 P. M. The speaker, Dr. George Gilbert Smith of Boston, has chosen as his subject, "Contraception and the Medical Profession".

H. J. DOWNEY, *Secretary.*

SOCIETY MEETINGS
CONGRESSES AND CONFERENCES

November 14—The William Harvey Society. Lecture at the Beth Israel Hospital, 8:00 P. M. Speaker: Dr. Howard W. Haggard, Associate Professor of Applied Physiology, Yale Medical School. Subject: "Medicine Through the Ages." Chairman: Dr. Nathan Sidel, Instructor in Medicine, Tufts Medical School.

November 17—Boston Medical History Club. See detailed notice on page 1007.

November 17-18—The National Society for the Prevention of Blindness. 1930 Annual Conference. See notice on page 1007.

November 18—The South End Medical Club. See detailed notice above.

November 19—Harvard Medical School. Amphitheatre C at 5 P. M. Lecture on "The Care of the Patient" by Dr. David Riesman, Professor of Clinical Medicine, University of Pennsylvania Medical School.

November 19—New England Obstetrical and Gynecological Society. See page 855, issue of October 23.

November 20—The Clinical Conference of the New England Hospital for Women and Children. See detailed notice above.

November 21—The New England Roentgen Ray Society. Detailed notice appears on page 1007.

December 3 and 10—Harvard Medical School. The George W. Gay Lectures on "Medical Ethics". Amphitheater C at 5 P. M. as follows: Wednesday, December 3—Dr. William H. Robey, Clinical Professor of Medicine, Harvard Medical School. Wednesday, December 10—Dr. Robey.

December 3-June 3—Cardiac Course. See page 854, issue of October 23.

March 23-27, 1931—Fifteenth annual clinical session of the American College of Physicians. Detailed notice appears on page 790, issue of April 17.

July 27-31, 1931—Third International Congress of Radiology, Paris. Complete notice appears on page 385, issue of August 21.

DISTRICT MEDICAL SOCIETIES

Berkshire District Medical Society

November 17—See detailed notice above.

Bristol North District Medical Society

April 16, 1931—Taunton Woman's Club.
September 17, 1931.

Franklin District Medical Society

January, 1931-May, 1931—The meetings are held on the second Tuesdays of January, March and May at 11 A. M. at the Weldon Hotel, Greenfield.

Middlesex East District Medical Society

January 14, 1931—Harvard Club of Boston.
March 11, 1931—At Reading.
May 13, 1931—At Wakefield.

Norfolk South District Medical Society

The meetings for the ensuing year are as follows: December 4, 1930, January 8, 1931, February 5, 1931, March 5, 1931, April 2, 1931, May 7, 1931.

All meetings begin at 12 noon. The February meeting will be held at the Quincy City Hospital. All other meetings will be held at the Norfolk County Hospital, South Braintree.

The censors will meet on May 7 at 11:30 A. M. at the Norfolk County Hospital, South Braintree.

NATHAN R. PILLSBURY, Secretary.

Suffolk District Medical Society

November 19-April 29—Combined meetings with the Boston Medical Library. These meetings will be held as specified below on Wednesdays, at 8:15 P. M.

November 19, 1930—Clinical Program, Massachusetts Memorial Hospitals.

December 17, 1930—Clinical Program, Boston Dispensary.

January 28, 1931—General meeting in association with the Boston Medical Library at the Boston Medical Library. "The Practice of Medicine in Relation to Public Health Activities." Speakers to be announced later.

February 25, 1931—Clinical Program, Boston City Hospital.

March 25, 1931—Clinical Program, Beth Israel Hospital.

April 29, 1931—Annual Meeting. Election of Officers. Boston Medical Library.

The medical profession is cordially invited to attend all of these meetings.

GEORGE S. DERBY, M.D.,
President, Suffolk District Medical Society.
LELAND S. McKITTRICK, M.D.,
Secretary, Suffolk District Medical Society.
HILBERT F. DAY, M.D.,
Boston Medical Library.

BOOK REVIEWS

Selected Readings in the History of Physiology, edited by JOHN FARQUHAR FULTON, M.D. Springfield, Illinois: Baltimore, Maryland: Charles C. Thomas, 1930, 20 + 317 pages. Price $5.00.

This book is a source book of physiological thought and as such covers a wide field of medicine. The first chapter, on "General Principles," quotes from the works of Robert Boyle, Hermann von Helmholtz, Arrhenius, E. H. Starling, L. J. Henderson, and others. Chapter 2 considers "The Circulation of the Blood" and the quotations range from Aristotle and Galen, through Servetus, to Harvey and Hales. On "The Capillaries," quotations are also given from Hales and in addition the series extends from Malpighi's observations in 1661 to those of Thomas Lewis in 1927. Similar selections are found in the chapters on "Respiration," "Digestion," "The Central Nervous System," and a group of interesting miscellaneous readings, which are contained in the last chapter. Here Professor Fulton has put in the work of Captain James Cook (1776), Casimir Funk (1911), Banting and Best (1922), and others.

The importance of this volume consists not only in the carefully selected quotations, but also in the

brief bibliography of each author and the exact reference to the book or paper in question. The many illustrations are excellent and the printing, binding and general appearance could hardly be improved. Further notice on this important book will be found in the editorial column.

Medical and Surgical Year Book—Physicians Hospital of Plattsburgh. Vol. 1, 1929. The William H. Miner Foundation.

This compilation of articles is the first volume of the addresses delivered at the summer sessions at the Physicians Hospital at Plattsburgh. "The aim was to provide for undergraduate medical students about to enter the senior year in their several medical colleges, an opportunity to acquire skill in the early diagnosis and treatment of cardio-renal disorders." Some lectures are also open to members of the medical profession.

Only commendation can be directed toward the purpose of these lectures in training students. The tendency to bridge the hiatus between the close of the formal educational period and the years of active practice by the interpolation of such periodic round table discussions should be fostered.

Mindful of the usefulness of the project, the reviewer however, questions the value of the publication of these lectures as a contribution to medical literature.

Edward Jenner and the Discovery of Smallpox Vaccination. By LOUIS H. RODDIS, Lieut. Commander, Medical Corps, U. S. N. George Banta Publishing Co., Menasha, Wisconsin, 1930. 155 pages. Price $1.00.

Interest in Edward Jenner, his home, his life and his times continues to stimulate many men to add to our already extensive literature. These books and papers, however, form only a part of the general interest shown in medical history, in this country and elsewhere, by the many pupils of William Osler and their friends, even to the second generation. The Osler spirit served to quicken men to such pleasant tasks and even ten years after his death hardly a preface is written without the mention of his name or that of one of his pupils.

The little book now under review is no exception for the author generously acknowledges the help of many of Osler's friends. The book itself is a reprint of a series of articles which appeared in *The Military Surgeon*, but in its present form it should have a much larger circulation than in the pages of a comparatively little known medical journal. The book covers the field in a broad manner, going into the details of smallpox before Jenner's time and into the effects of inoculations by Jenner on the physicians in this country, especially upon Zabdiel Boylston, the first inoculator by the Jenner method. The details of Jenner's life are, naturally, largely taken from Baron's well-known "Life of Edward Jenner", published in 1827-1838. The author has made an effort to supplement this work by the investigation of later writers, although he seems to have missed many of Jenner's letters printed in the article by Henry Barton Jacobs in "Contributions to Medical and Biological Research", dedicated to Sir William Osler, New York, 1919, and also the notes found in the "Bibliotheca Osleriana" in regard to the actual note-book kept by Jenner and now in the library of the Royal College of Physicians, London. There are a number of typographical errors; the town of Rodborough, where, at the Fleece Inn, Jenner and his companions used to meet as the "Medico-convivial Society", is referred to as Redborough. The book is also printed on poor paper and the illustrations badly reproduced. The volume, nevertheless, is welcome as an addition to our Jenneriana.

Physiology and Biochemistry in Modern Medicine. By J. J. R. MACLEOD. 6th Edition, 1930. C. V. Mosby Company. St. Louis. Price $11.00.

The appearance of a new edition of MacLeod arouses hopes and expectations. The preface reads, in part, "Steady increase in general knowledge, rather than discovery, has been the feature of the advances of physiology during the past three years, so that the changes in the present edition are spread through the volume. Room has been made for new matter by the removal of paragraphs that are no longer necessary and by placing others in fine print. The size of the volume remains unchanged."

Within the self-imposed limitations given, the author has, on the whole, done his task well. Nevertheless, one wishes that revision had been even more extensive and that all of the book were more nearly contemporary—few references are given beyond the year 1927. The section on enzymes, for example, might well mention the work of Willstatter's school; that on respiration leaves our knowledge little advanced beyond Barcroft's earlier work —only a casual reference to L. J. Henderson's most recent book appears to make it modern. The portion devoted to ductless glands contains a reference to Kamm's recent work (1928) as its chief tribute to more recent investigations. In discussing the kidney, the later results of Richards and his collaborators might well be included. The bibliography ought to have been revised referring to the newer editions of such standard works as Lusk, "The Science of Nutrition" and Cannon's "Bodily Changes." Other shortcomings of the same type might easily be cited. It is also worth noting that the physiological aspects are far better treated than the chemical.

None the less, though many of the hopes and expectations remain unsatisfied, the book is still a good text in physiology and will doubtless satisfactorily serve as a reference book for those clinicians who wish to refresh their physiological knowledge.

Materia Medica for Nurses. By GEORGE M. PAUL, M.D. Published by W. B. Saunders Co., Philadelphia. Sixth Edition. Price $1.75.

A very clear, concise textbook on Materia Medica. There is an excellent chapter dealing with Practical Therapeutics. The section on drugs of minor im-

portance is very good, and there is also a very up-to-date chapter on newer drugs which every supervisor will appreciate. This textbook should prove very valuable for the student nurse and the instructor.

Readings in Psychology. By RAYMOND HOLDER WHEELER. Pp. + 597: 38 Figures. Thomas Y. Crowell Company, New York, 1930. Price $3.75.

A previous book by the author, entitled "The Science of Psychology," has been already reviewed in the *New England Journal of Medicine* (September 19, 1929). The present volume contains a selection of readings for the beginning student in psychology, the organization of the readings corresponding to the plan of the text in the book already mentioned. The contents of the text were selected from published periodic or monographic material on experimental investigations by various authors, together with texts by Dr. Wheeler and various collaborators written especially for this volume, thus giving the student ready access to scattered contributions.

From the practical aspect of the material selected, it appears to the reviewer that many of the selections are rather too technical and complicated for the beginning student. After the student has gone through this volume it is questionable how clear an idea he will obtain of the dynamic aspects of psychology, from the diagrams and tables. Ideal readings for the beginner in psychology should consist of carefully selected material discussing mental processes, emotional reactions, and the structure of the mental apparatus. It should be impressed upon the beginner in psychology that mind deals with processes of the nature of feeling, thinking and wishing, all of which are essentially unconscious, the conscious processes being merely isolated acts or parts of the entire psychical activity. It is difficult to see, for instance, how schizophrenic mechanism can be explained by a "form" psychology as set forth in one of the chapters of this volume. One of the most interesting chapters is devoted to an analysis of the solving of problem-situations by preschool children, in which the author employs the technique utilized by Koehler in his famous work on chimpanzees and draws some interesting conclusions from the investigation.

Infant Nutrition. By W. MCKIM MARRIOTT, B.S., M.D., Professor of Pediatrics, Washington University School of Medicine; Physician-in-Chief, St. Louis Children's Hospital. The C. V. Mosby Company, Publishers, St. Louis, Mo. Price $5.50.

Every so often existing knowledge on any subject must be brought up to date between the covers of a single volume, and so it is that we have our successions of textbooks, each an improvement on its predecessor. Marriott has been recognized for fifteen years as one of the leading authorities on infant nutrition, so it is with respect that we welcome his textbook. He has ridden his hobbies—as who has not?—but in this volume he does not ride them, for it is essentially conservative and essentially sound.

He acknowledges the fact that good results may be obtained by a variety of methods, and while he gives us his own, he does not slight those of others. He may or he may not be carrying the ball too far when he cites chronic and subacute otitis and mastoiditis as common causes of alimentary intoxication; it is a new theory and has both its adherents and its opponents. It is too early to judge of the theory, although Wishart (*J. A. M. A.*, October 11, 1930) presents evidence that seems to render it untenable.

As a general textbook on infant nutrition, this may certainly be recommended.

Alimentary Anaphylaxis. By LAROCHE, RICHET (Fils) and SAINT GIRONS. Translated from the French by A. H. Rowe, M.D. University of California Press, 1930. Price $2.00.

"L'Anaphylaxie Alimentaire" a brochure of pocket size was published in Paris in 1919. In it the symptoms of food allergy are described and the considerable amount of experimental work on the sensitization of animals by feeding is reviewed. A good bibliography is appended.

Interest in food allergy has been reawakened by the recent work of Vaughan, Eyermann, Rowe and other Americans and Dr. Rowe has made a timely contribution by presenting his excellent translation of this little book in such attractive form. The facts described so long ago have been little modified in the intervening ten years, although the conception of the subject in its relation to the other manifestations of "allergy" has been broadened greatly.

The work is of historical interest to the student of allergy but the general practitioner will do well to peruse it because the subject of food allergy may have a clinical application which is wider than has been appreciated. Incidentally the book is short and is easily read.

Les Régimes du Nourrisson. Par E. Lesné et Robert Clemént. Gauthier-Villars et Cie. Paris. 25 francs.

This small book, written in French, forms one of a series of monographs on pediatrics. As the name implies, it describes the care of the nursling. The regulation of breast feeding, the advantages and disadvantages of the wet nurse, the use of modified milk, and weaning the normal infant are considered in the first part. In part two is given the regimen for the ill infant. Under this heading, the care of the premature infant, the treatment of diarrhoea and constipation, the changes necessary in the diet to relieve indigestion of various kinds, are given. At the end of the book, the treatment of anemia, rickets, hepatic insufficiency, eczema, and urticaria, are some of the diseases and disorders discussed in separate chapters. The book is not difficult reading for one with an ordinary knowledge of the language, and should be a valuable guide to the French methods of feeding.